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PROTOZOA

COMPILED BY

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and R. H. CUMMINGS, Ph.D., B.Sc.

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2. PROTOZOA

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FOREWORD

Papers dealing with Protozoa entirely from a medical or veterinary standpoint (clinical, therapeutic, etc.) are omitted, but notices of these will be found in *Tropical Diseases Bulletin* and *Veterinary Bulletin*.

I.—TITLES

In the list of titles the year has been omitted where it is the same as the volume year of the "Record", namely (1955).

Anon. (1). Toxoplasmosis in infancy. *Brit. med. J.* **2**: 1073-1074.

Anon. (2). Opinions of the International Commission on Zoological Nomenclature concerning the genera *Plasmodium* and *Entamoeba*. *J. Protozool.* **2**: 51.

Anon. (3). Bibliographie du *Plasmodium berghei* I. H. Vincke et M. Lips. *Rapp. Inst. Rech. sci. Afr. Centr.* **5**: 157-165.

Anon. (4). Professor Saul Adler—pioneer of Israel science. *Refuah Veterinarith*, Tel-Aviv **12**: 294-291 portrait. [In Hebrew and English.]

Anon. (5). Brown's Coppice. A survey. Birmingham 1954: 1-79, figs.

Anon. (6). T. Wayland Vaughan. *Quart. J. geol. Soc. Lond.* **107** 1952: 52-54.

Aaronson, S. *see* Baker, H.

Abbott, P. *see* Mackinnon, J. E.

Accordi, B. Sul Pleistocene medio nell'Appennino Bolognese-Romagnolo. [Foraminifera.] *Ann. Univ. Ferrara Sez. IX* **1** 1954: 199-206, fig.

Achmerov, A. C. (1). [Speciation in Microsporidia of genus *Thelohannelus* Kudo from the Amur carp.] *C. R. (Doklady) Acad. Sci. USSR* **105**: 1129-1131 fig. [In Russian.]

Achmerov, A. C. (2). [Simplified method for fixation and making microscopical preparations of Myxosporidia of fishes.] *Zool. Ž.*, Moscow **34**: 1437-1438 figs. [In Russian.]

Achmerov, A. C. & **Bogdanova**, E. A. [Method of making microscopical preparations of *Trichodina* from fixed fishes.] *Zool. Ž.*, Moscow **34**: 234-235. [In Russian.]

Adler, J. *see* Adler, S.

Adler, S. & **Adler**, J. (1). The agglutinogenic properties of various stages of the Leishmanias. *Bull. res. Coun. Israel* **4**: 396-397.

Adler, S. & **Adler**, J. (2). The capacity of the hamster *Mesocricetus auratus* to produce agglutinins against *Leishmania* sp. *Bull. res. Coun. Israel* **5B**: 189.

Adler, S. & **Halfi**, L. Observations on *Leishmania enriettii* Muniz and Medina, 1948. *Ann. trop. Med. Parasit.* **49**: 37-41 figs.

Aelterman, H. Onderzoek over de begroeëing van voorwerpen in stromend water. *Biol. Jaarb.* **19** 1952: 199-250.

Agius-Ferrante, T. J. Infantile visceral leishmaniasis in the Maltese Islands. *Brit. med. J.* **2**: 654-656.

Agosin, M. & **Brand**, T. von (1). The influence of puromycin on the carbohydrate metabolism of *Trypanosoma equiperdum*. *Antibiot. & Chemother.* **4** 1954: 624-632.

Agosin, M. & **Brand**, T. von (2). Characterization and intracellular distribution of the succinic dehydrogenase of *Trypanosoma cruzi*. *Exper. Parasit.* **4**: 548-563 figs.

Agostinucci, J. (1). *Haemoproteus columbae* parassita di *Columba oenas* L. *Riv. Parassit.* **16**: 205.

Agostinucci, J. (2). Contributo alla conoscenza dei coccidi di *Talpa europaea*. *Riv. Parassit.* **16**: 217-220 figs. [English summary.]

Agostinucci, J. (3). Contributo alla conoscenza della diffusione delle parassitosi intestinali nella citta di Roma. [Incl. protozoa.] Riv. Parasit. 16 : 271-272.

Aguiar, A. A. see Carvalhal, S.

Aguiar, A. A. see Uvo, D.

Aguirre, J. H. see Aragão, J. M. B. de.

Aizenberg, D. E. & Brazhnikova, N. E. [On the Namurian in the Donetz Basin.] [Foraminifera.] Bull. Soc. Nat. Moscow geol. 1 : 37-47. [In Russian.]

Akers, W. H. Some planktonic foraminifera of the American Gulf Coast and suggested correlations with the Caribbean Tertiary. J. Paleont. 29 : 647-664, figs.

Al-Abbass, A. H. *Plasmodium praecox* in Iraq. A survey of 108 sparrows in the suburbs of Baghdad. Bull. endem. Dis., Baghdad 1 : 237-238.

Alba, M., Artigas, J. & Otto, I. Accion de la puromicina en cultivos de *Entamoeba histolytica*. Bol. Chilen. Parasit. 10 : 9-10. [English summary.]

Albers, J. P., & Robertson, J. F. New evidence establishes Permian age for the Dekkas andesite, Shasta County, California. [Foraminifera]. Bull. geol. Soc. Amer. 63 1952 : 1319.

Albrecht, A. M. see Broquist, H. P.

Albritton, C. C., Schell, W., Hill, C. S., & Puryear, J. R. (1). Bearing of foraminiferal populations on late Comanchean history of northeastern Texas. Bull. geol. Soc. Amer. 63 1952 : 1230.

Albritton, C. C. jr., Schell, W. W., Hill, C. S., & Puryear, J. R. (2). Foraminiferal populations in the Grayson Marl. Bull. geol. Soc. Amer. 65 1954 : 327-336, figs.

Alexander, R. D. Desmoinesian fusulinids of northeastern Oklahoma. Circ. Okla. geol. Surv. 31 1954 : 1-66, figs.

Alicata, J. E. & Dajani, S. W. (1). A brief survey of the intestinal parasites of man in the Hashemite Kingdom of Jordan. Amer. J. trop. Med. Hyg. 4 : 1037-1041.

Alicata, J. E. & Dajani, S. W. (2). Parasitical studies in the Hashemite Kingdom of Jordan. [Malaria and amoebiasis.] Proc. Hawaii Acad. Sci. No. 30 : 16-17.

Allgén, C. A. Die Suctoren der schwedischen Südpolar-Expedition (1901-1903). Zool. Anz. 154 : 36-48, figs.

Alliata, E. di N. (1). A new type of microfaunal diagram. [Foraminifera.] Micropaleontology 1 : 133-139, figs.

Alliata, E. di N. (2). News—Italy. Micropaleontology 1 : 199-203.

Alva, A. H. Estudio morfológico y experimental del *Trypanosoma* encontrado en un ratón del campo *Phyllotis darwini limatus*. Rev. Cienc., Lima 44 1942 : 395-409, 443-456, figs.

Alvarez, M. Geological significance of the distribution of the Mexican oilfields. [Foraminifera.] Proc. Third World Pet. Cong. 1 1951 : 73-85.

Alwar, V. S. & Ramanujachari, J. Transmission of *Trypanosoma evansi* Steel, 1885 from mammals to fowls. Curr. Sci. 24 : 87.

Amato Neto, V. see Nussenzweig, V.

Ambroggi, R. Le Pliocène de la vallée du Sous (sub-marocain). [Foraminifera.] C. R. Acad. Sci., Paris 234 1952 : 2462-2463.

Andersen, H. V. Recent foraminiferal faunules from the Louisiana Gulf Coast. Bull. geol. Soc. Amer. 63 1952 : 1231.

Anderson, E. The electron microscopy of *Trichomonas muris*. J. Protozool. 2 : 114-124 figs.

Anderson, E., Saxe, L. H. & Beams, H. W. Electron microscope observations on *Trypanosoma equiperdum*. J. Protozool. 2 Suppl.: 11.

Anderson, H. H. see Kerner, M. W.

- Anderson, H. H.** see Loran, M. R.
- Anderson, R. C.** see Fallis, A. M.
- Andrews, E. A. (1).** Some minute movements in protoplasm. Biol. Bull., Woods Hole 108: 121-124.
- Andrews, E. A. (2).** More folliculinids (Ciliata, Heterotrichia) from British Columbia. J. Fish. Res. Bd. Canada 12: 143-146, figs.
- Andruško, A. M. & Markov, J. S. (1).** [New findings of *Leishmania* in reptiles of Middle Asia.] Vestn. Leningrad. Univ. (Ser. Biol., Geogr. Geol.) No. 1: 59-59 figs. [In Russian.]
- Andruško, A. M. & Markov, J. S. (2).** [Parasitic fauna of blood of lizards in the desert Kizil-Kum. (Incl. protozoa).] Vestn. Leningrad. Univ. (Ser. Biol., Geogr. Geol.) No. 4: 31-46 figs. [In Russian.]
- Andruško, A. M. & Markov, J. S. (3).** [Incidence of infection with blood parasites in reptiles of various biotopes in the desert of Karakum. (Incl. protozoa).] C. R. (Doklady) Acad. Sci. USSR 104: 674-677. [In Russian.]
- Ansari, M. A. R. (1).** A note on the morphology and method of division in *Giardia muris* (Grassi). Pakist. J. Hlth. 4 1954: 55-65 figs.
- Ansari, M. A. R. (2).** An epitome on the present state of our knowledge of the parasitic duodenal flagellate of man—*Giardia intestinalis* (Lambl, 1859). Pakistan J. Hlth. 4 1954: 131-158, 1955: 175-194 figs.
- Ansari, M. A. R. (3).** The genus *Retortamonas* Grassi (Mastigophora: Retortamonidae). Biologia, Lahore 1: 40-69, figs.
- Ansary, S. E.** Report on the foraminiferal fauna from the Upper Eocene of Egypt. Publ. Inst. Desert Egypte 6: 1-160, figs.
- Aragão, H. de B.** Über den Entwicklungsgang und die Übertragung von *Haemoproteus columbae*. Vorläufige Mitteilung. (Reprint from Arch. Protistenk. 12 1908: 154-167). Mem. Inst. O. Cruz 53: 157-170 figs.
- Aragão, J. M. B. de, Aguirre, G. H., Leal, J. M. & Serafim, E.** Contribuição ao conhecimento da distribuição geográfica dos triatomíneos domiciliários e seus índices de infecção natural por *Schizotrypanum cruzi*, no Estado da Bahia. Rev. Brasil. Malariol. 7: 409-421. [English summary.]
- Arai, J., Jujimoto, H., Takano, S., & Kawada, S.** Limestone from the eastern part of Kiwanto-Mountainland. [Foraminifera]. J. geol. Soc. Japan, 58 1952: 319. [Abstract in Japanese.]
- Arama, T. del P.** Algunos géneros y especies de microforaminíferos miocénicos de La Pañoleta (Sevilla). Bol. Soc. esp. Hist. nat. 51 1954: 107-130, figs.
- Arcoleo, J. & Carrescia, P. M.** Quadri evolutivi ed ematici nelle infezioni da *Plasmodium berghei* del topo albino. Riv. Malariol. 34: 25-36, figs. [English summary.]
- Arena, J. F. de la.** Nueva especie de amiba de Cuba. Mem. Soc. cubana Hist. nat. 22: 15-18, figs.
- Arnold, Z.** An unusual feature of Miliolid reproduction. Contr. Cush. Fdn. 6: 94-96, figs.
- Arnould, M. & Dollé, J. E.** Sur la présence d'un niveau fossilifère oligocène dans l'île de Zembra. [Foraminifera.] Mém. Soc. Sci. nat. Tunis 2 1954: 65-70, figs.
- Artigas, J.** Técnica de tinción por hematoxilina molibdica par protozoos en frotis de deposiciones preservados en fijador polivinilico. Bol. Chilen. Parasit. 10: 57-58. [English summary.]
- Artigas, J.** see Alba, M.
- Artigas, J.** see Neghme, A.
- Asami, K. & Nakamura, M.** Experimental inoculation of bacteria-free *Trichomonas vaginalis* into human vaginae and its effect on the glycogen content of vaginal epithelia. Amer. J. trop Med. Hyg. 4: 254-258, figs.
- Asami, K., Nodake, Y. & Ueno, T.** Cultivation of *Trichomonas vaginalis* on solid medium. Exp. Parasit. 4: 34-39, figs.

Asano, K. (1). Paleogene foraminifera from the Ishikari and Hushiro coal-fields, Hokkaido. Short Pap. Inst. Geol. Tôhoku **4** 1952 : 23-46, figs.

Asano, K. (2). Foraminifera from the Miocene Takinoue formations near Momijiyama, Hokkaido. Short Pap. Inst. Geol. Tôhoku **4** 1952 : 47-51, figs.

Asano, K. (3). Miocene foraminifera from the Noto Peninsula, Ishikawa Prefecture. Short Pap. Inst. Geol. Tôhoku **5** 1953 : 1-22, figs.

Asano, K. (4). Oligocene foraminifera from Utsanai, Tonbetsumura, north Hokkaido. Short Pap. Inst. Geol. Tôhoku **5** 1953 : 22-23, figs.

Asano, K. (5). Foraminiferal sequence in the Paleo-Ishikari Sea, Hokkaido, Japan. J. geol. Soc. Japan **60** 1954 : 43-49, figs.

Asano, K. (6). News-Japan. Micro-paleontology **1** : 293-294.

Aumann, G. Das Saprobiensystem und die Ciliaten. Mikrokosmos **45** : 25-30, figs.

Awad, F. I. see Garnham, P. C. C.

Bacon, D. F. see McCarthy, D. D.

Baernstein, H. D. Aldolase in *Trichomonas vaginalis*. Exper. Parasit. **4** : 323-334, figs.

Bailey, L. The infection of the ventriculus of the adult honeybee by *Nosema apis* (Zander). Parasitology **45** : 86-94, figs.

Baines, S., Hawkes, H. A., Hewitt, C. H. & Jenkins, S. H. Protozoa as indicators in activated sludge treatment. Verh. int. Ver. Limnol. **12** : 715.

Baker, H., Aaronson, S., Rodriguez, E., Petersen, R. A., Hutner, R. A. & Hutner, S. H. Cobalamin, thiamine, "chrysomonad suspension factor" and other enhanced requirements of *Ochromonas* grown at elevated temperatures. J. Protozool. **2** Suppl.: 10.

Baker, H., Hutner, S. H. & Sobotka, H. Nutritional factors in thermophily : a comparative study of bacteria and *Euglena*. Ann. N. Y. Acad. Sci. **62** 349-376.

Baker, J. R. (1). Developmental stages of (a) *Haemoproteus* and (b) trypansomes in *Ornithomyia*. Trans. R. Soc. trop. Med. Hyg. **49** : 11.

Baker, J. R. (2). Early stages of experimental infections of *Trypanosoma avium* in canaries. Trans. R. Soc. trop. Med. Hyg. **49** 296.

Balamuth, W. Differential responses of several species of *Entamoeba* to cultivation with Haemo-flagellates. J. Protozool. **2** Suppl.: 9.

Balamuth, W. & Rowe, M. B. Irreversibility of transformations between amoeboid and flagellate phases of *Tetramitus rostratus*. J. Protozool. **2** Suppl.: 10.

Ball, J. H. & Moebius, R. E. A Foettingerid (Apostomea) from the sea anemone *Anthopleura xanthogrammica*. J. Protozool. **2** Suppl.: 2.

Ball, J. H. see Bonorris, J. S.

Ball, G. H. see Chao, J.

Ballard, A. C. Observations on pond life-VII. Biomyxa. Microscope **8** 1952 : 309-314, figs.

Balozet, L. Enquête sérologique sur la toxoplasmose de l'homme et du chien dans la région d'Alger. Arch. Inst. Pasteur Algér. **33** : 78-83.

Bandy, O. L. Evidence of displaced foraminifera in the Purisima Formation of the Halfmoon Area, California. Contr. Cush. Fdn. **6** : 77-79, fig.

Banerjee, A. K. Studies on parasitic ciliates from Indian ruminants. Proc. zool. Soc., Calcutta **8** : 87-100, figs.

Bankovski, V. A., & Redichkin, N. A. [The Schwagerina-Beds in the north-west of the Donetz Basin.] C. R. Acad. Sci. URSS **104** : 456-458, fig. [In Russian.]

Barbehenn, K. R. see Kirner, S. H.

Barker, S. B. see Hanson, R. W.

Barnard, T. News-Great Britain. *Micropaleontology* **1**: 292-293.

Barrow, J. H. jr. Social behavior in fresh-water fish and its effect on resistance to trypanosomes. *Proc. nat. Acad. Sci., Wash.* **41**: 676-679.

Bartenstein, H. Faziesbeobachtungen an der Grenze von brackischen zu marinem Valendis des Rehburger Sattels [Foraminifera]. *Jahrb. Naturhist. Ges. Hannover* **101**: 1951: 34-42.

Baxter, M. *see* Chang, S. L.

Bayles, A. *see* Thompson, P. E.

Beale, G. H. *The genetics of Paramecium aurelia*. Cambridge University Press. 1954. xi+179, figs.

Beams, H. W. *see* Anderson, E.

Becker, C. E. & Geiman, Q. M. Utilization of glucose by two strains of *Entamoeba histolytica*. *Exper. Parasit.* **4**: 493-501.

Becker, E. R., **Pattillo**, W. H., **Farmer**, J. N. & **Van Doorninck**, W. M. Size of oocyst of *Eimeria brunetti* and *E. necatrix*. *J. Parasit.* **41** Suppl.: 18.

Becker, E. R., **Zimmermann**, W. J. & **Pattillo**, W. A biometrical study of the oocyst of *Eimeria brunetti*, a parasite of the common fowl. *J. Protozool.* **2**: 145-150.

Becker, E. R. *see* Pattillo, W. H.

Becker, Y. *see* Yoeli, M.

Beckmann, H. Zur Anwendung von Essigsäure in der Mikropaläontologie. [Foraminifera]. *Palaeont. Zeit.* Stuttgart **26** 1952: 138-139.

Beckmann, J. P. Die Foraminiferen der Oceanic Formation (Eocaen-Oligocaen) von Barbados, Kl. Antilles. *Ecl. geol. Helv.* **46** 1953: 301-412, figs.

Behrens, M. & **Geissler**, H. Reingewinnung von Toxoplasmen. *Z. Hyg. InfektKr.* **138** 1954: 508-512, figs.

Beklemishev, V. N. [Classification of natural vectors of transmissible diseases of man. (Incl. protozoa)]. *Zool. Zh.*, Moscow **34**: 3-16. [In Russian.]

Bennett, J. F. *see* Fallis, A. M. **Bernhauser**, A. Zur Kenntnis der Retzer Sande. [Foraminifera]. *S. B. öst. Akad. Wiss. Abt. I.* **164**: 163-192, figs.

Bernkopf, H. *see* Yoeli, M.

Bernstein, E. & **Jahn**, T. L. Certain aspects of the sexuality of two species of *Chlamydomonas*. *J. Protozool.* **2**: 81-85.

Bernstein, E. *see* Gross, J. A.

Betts, G. R. *see* Cantrell, W.

Bhatia, S. B. The foraminiferal fauna of the late Palaeogene sediments of the Isle of Wight, England. *J. Paleont.* **29**: 665-693, figs.

Biancalana, A. *see* Nussenzweig, V.

Bianchini, C. A. A new fixing and staining technique for *Trypanosoma cruzi* in blood films. *Doc. Med. geogr. trop.* **7**: 130-133, figs.

Bibeau, A. A. Studies on the *in vitro* propagation of *Entamoeba gingivalis*. *J. Protozool.* **2** Suppl.: 13.

Biczok, F. Über die Wirkung von Wurzelextrakten auf Einzellige Organismen. *Acta Biol. Szeged N. S.* **1**: 160-173, figs.

Bieda, F. (1). Polska-kolekcia mikropaleontologii stosowanej. [Foraminifera]. *Przegląd Geol.* **9** 1953: 1-4 (385-8), figs.

Bieda, F. (2). Obecny stan micropaleontologii fliszu Karpackiego. [Foraminifera]. *Przegląd Geol.* **3** 1954: 89-93, figs.

Bieda, F. (3). News-Poland. *Micropaleontology* **1**: 101-102.

Bielecka, W. (1). Znaczenie stratygraficzne otwornic. [Foraminifera]. *Przegląd Geol.* **1** 1953: 38-42, figs.

Bielecka, W. (2). [Ecology of Foraminifera]. *Przegląd Geol.* **9** 1954: 364-369, figs.

Bielecka, W. & **Pozaryski**, W. Stratygrafia micropaleontologiczna górnego malmu w Polsce Środkowej. *Trav. Serv. geol. Pologne* **12** 1954: 1-77, figs. [English summary, 139-206.]

Bilik, A. A., Blank, M. I., Vorobyev, B. S., Lapkin, I. Y., Paletz, L. S., & Cherpak, S. E. [New data on the salt-bearing horizons of the Donetz Permian.] [Foraminifera.] C. R. Acad. Sci. URSS 103 : 113-115. [In Russian.]

Birkenmajer, K. [On the age of the so-called "Puchov Marls" in the Pieniny (Central Carpathians) and stratigraphy of the Pieniny Klipper-Belt mantle.] [Foraminifera.] Bull. Serv. géol. Pologne 88 1954 : 1-61. [English summary p. 63.]

Bishop, A. Problems concerned with gametogenesis in Haemosporidiida, with particular reference to the genus *Plasmodium*. Parasitology 45 : 163-185.

Bissell, H. J. Stratigraphy and structure of northeast Strawberry Valley Quadrangle, Utah. [Foraminifera]. Bull. Amer. Ass. Petr. Geol. 36 1952 : 575-634, figs.

Blagg, W., Schloegel, E. L., Mansour, N. S. & Khalaf, G. I. A new concentration technic for the demonstration of protozoa and helminth eggs in feces. Amer. J. trop. Med. Hyg. 4 : 23-28.

Blanc-Brude, M. see Dragesco, J.

Blanc-Brude, R., Skret, Y. & Dragesco, J. Sur la biologie de *Nuclearia delicatula* (Cienkowski). Bull. Microsc. appl. (2) 5 : 113-117, figs.

Blank, M. I. see Bilik, A. A.

Blorn, G. I. [On the Aptian deposits of the basin of the River Kobra.] [Foraminifera.] C. R. Acad. Sci. URSS 100 : 1139-1140. [In Russian.]

Blow, W. H. Dissection of highly perforate calcareous foraminifera. Micropaleontology 1 : 190.

Blumenthal, H., Michaelson, J. B. & DeLamater, J. N. Some aspects of the phosphomonoesterase activity of *Endamoeba histolytica*. Exper. Parasit. 4 : 201-207.

Blumenthal, H. see Hallman, F. A.

Bock, K. J. *Condylostoma vastum* nov.spec. und *Aspidisca pertinens* nov.spec., zwei sandbewohnende Ciliaten aus dem Küstengebiet der Kieler Bucht. Zool. Anz. 154 : 302-304.

Bock, M. & Mudrow-Reichenow, L. Experimentelle Untersuchungen über *Entamoeba histolytica*. Z. Tropenmed. Parasit. 6 : 344-347, figs. [English summary.]

Boero, J. J. see Morini, E. G.

Bogdanova, E. A. see Achmerov, A. C.

Bogdanovič, V. V. [Spontaneous balantidiosis in rats]. Med. Parasitol. paras. Dis., Moscow 24 (4) : 326-329, figs. [In Russian.]

Boltovskoy, E. (1). Foraminiferos del Golfo San Jorge. Rev. Inst. Invest. Mus. argent. Cienc. nat. Geol. 3 1954 : 79-246, figs.

Boltovskoy, E. (2). Foraminiferos de la Bahía San Blas (Provincia de Buenos Aires). Rev. Inst. Invest. Mus. argent. Cienc. nat. Geol. 3 1954 : 247-300, figs.

Boltovskoy, E. (3). News—Argentina. Micropaleontology 1 : 384-386.

Boltovskoy, E. (4). Recent foraminifera from shore sands at Quequén, Province of Buenos Aires, and changes in the foraminiferal fauna to the north and south. Contr. C. S. F. 6 : 39-42, figs.

Bond, H. W. see Greenberg, J.

Boni, A., & Capetta, B. Osservazioni litologiche e stratigrafiche sulla formazione miocenica di Mombisaggio (Tortona). [Foraminifera.] Atti Ist. geol. Univ. Pavia 4 1950 : 68-82, figs.

Bonnard, E. G. see Gubler, Y.

Bonner, J. T., Chiquoine, A. D., & Kolderie, M. Q. A histochemical study of differentiation in the cellular slime molds. J. exp. Zool. 130 : 133-157, figs.

Bonorris, J. S. & Ball, G. H. *Schellackia occidentalis* n.sp., a blood-inhabiting coccidian found in lizards in Southern California. J. Protozool. 2 : 31-34, figs.

- Borba, A. M.** see Lobo, A. J. S.
- Bostwick, D. A.** Stratigraphy of the Wood River Formation, South Central Idaho. *J. Paleont.* **29**: 941-951, figs.
- Boucot, A. J.** see Switzer, G.
- Bouet, J. & Roubaud, E.** A propos des travaux récents de M. Moronet sur les trypanosomiases animales de l'A.O.F. *Bull. Soc. Path. exot.* **48**: 166-170.
- Boughton, D. C.** see Davis L. R.
- Bouisset, L. & Ruffié, J.** Hématozoaires d'oiseaux de la région Toulousaine. *Vie et Milieu* **6**: 330-334, figs.
- Bourcart, N.** see Buttner, A.
- Bovee, E. C.** A small amoeba of the genus *Polychoas*. *J. Protozool.* **2 Suppl.**: 2.
- Bowen, R. N. C. (1).** The stratigraphical range of the foraminiferal genus *Orbulina* d'Orbigny 1839. *Geol. Mag.* **92**: 162-167.
- Bowen, R. N. C. (2).** A new name for an Eocene foraminifer from the Upper London Clay of the Isle of Wight, England. *Contr. Cush. Fdn.* **6**: 120.
- Bowen, R. N. C. (3).** Observations on the foraminiferal genus *Gaudryina* d'Orbigny, 1839. *Micropaleontology* **1**: 359-364, figs.
- Bowman, G. W.** see Davis, L. R.
- Braarud, T., Deflandre, D., Halldal, P., & Kamptner, E.** Terminology, nomenclature, and systematics of the Coccolithophoridae. *Micropaleontology* **1**: 157-159.
- Brachet, J.** Action of ribonuclease and ribonucleic acid on living *Amoebae*. *Nature, Lond.* **175**: 851-853, figs.
- Bradin, jr., J. L.** see Kun, E.
- Bradshaw, J. S.** Preliminary laboratory experiments on ecology of foraminiferal populations. *Micropaleontology* **1**: 351-358, figs.
- Brand, T. von. & Agosin, M.** The utilization of Krebs cycle intermediates by the culture forms of *Trypanosoma cruzi* and *Leishmania tropica*. *J. inf. Dis.* **97**: 274-279.
- Brand, T. von** see Agosin, M.
- Bray, R. S.** Resistance of *Plasmodium falciparum* to pyrimethamine. *Trans. R. Soc. trop. Med. Hyg.*, **49**: 93-94.
- Bray, R. S.** see Garnham, P. C. C.
- Brazhnikova, N. E.** see Aisenberg, D. E.
- Breton-Gorius, A.** see Fauré-Fremiet, E.
- Bridge, J.** see Cole, W. S.
- Brill, K. G. jr.** Stratigraphy in the Permo-Pennsylvanian zeugogeosyncline of Colorado and northern New Mexico. [Foraminifera.] *Bull. geol. Soc. Amer.* **63** 1952: 809-880, figs.
- Bringmann, G.** see Holz, J.
- Brönnimann, P. (1).** On the occurrence of Calpionellids in Cuba. *Ecl. geol. helv.* **46** 1953: 263-268 figs.
- Brönnimann, P. (2).** Upper Cretaceous Orbitoidal Foraminifera from Cuba. III. *Pseudorbitoides Douvillé*, 1922. *Contr. Cush. Fdn.* **6**: 57-76, figs.
- Brönnimann, P. (3).** Upper Cretaceous Orbitoidal foraminifera from Cuba. IV. *Rhabdorbioides*, n.gen. *Contr. Cush. Fdn.* **6**: 97-104, figs.
- Brönnimann, P. (4).** Microfossils incertae sedis from the Upper Jurassic and Lower Cretaceous of Cuba. *Micropaleontology* **1**: 28-51, figs.
- Brönnimann, P. (5).** News—West Indies. *Micropaleontology* **1**: 389.
- Brooke, M. M., Melvin, D. M., Sappenfield, R., Payne, F., Carter, F. R. N., Offutt, A. C. & Frye, W. W.** Studies of a water-borne outbreak of amebiasis, South Bend, Indiana. *Amer. J. Hyg.* **62**: 214-226.
- Brooke, M. M. & Sulzer, A. J.** Directions for performing Sabin-Feldman cytoplasm-modifying (methylene blue dye) test for toxoplasmosis. *Offic. Bull. Conf. Publ. Hlth. Dir. (U.S.A.)* **13**: 136-147.

- Brooke, M. M.** see Melvin, D. M.
- Brooke, M. M.** see Norman, L.
- Broquist, H. P., & Albrecht, A. M.** Pteridines and the nutrition of the Protozoan *Crithidia fasciculata*. Proc. Soc. exp. Biol. Med. **89**: 178-186, fig.
- Broquist, H. P.** see Stokstad, E. L. R.
- Brown, M. M., & Castell, C. P.** Additions to the London Clay fauna of Oxshott, Surrey. [Foraminifera]. Lond. Nat. **34**: 46-48.
- Bruce-Chwatt, L. J. & Gibson, F. D. I.** A *Plasmodium* from a Nigerian rodent. II. A *Babesia* from wild Nigerian rodents. Trans. R. Soc. trop. Med. Hyg. **49**: 9-10.
- Bucco, G. & Chieffi, G. (1).** Sulle varietà morfologiche di *Entamoeba histolytica*. II. Variazione del diametro dei ceppi. Riv. Parassit. **16**: 3-6. [English summary.]
- Bucco, G. & Chieffi, G. (2).** Sulle varietà morfologiche di *Entamoeba histolytica*. III. Diametro e potere patogeno. Riv. Parassit. **16**: 65-71, 3 figs.
- Bucher, W. H.** Geologic structure and orogenic history of Venezuela. Text to accompany the author's geologic tectonic map of Venezuela. [Foraminifera.] Mem. geol. Soc. Amer. **49** 1952: 1-113.
- Bull, P. C. & Taylor, R. H.** The influence of host age in parasitism of wild rabbits. [Coccidia.] Proc. N.Z. ecol. Soc. No. **3**: 29-30.
- Bullard, F. J.** Polymorphinidae of the Cretaceous (Cenomanian) Del Rio shale. J. Paleont. **27** (3) 1953 338-346, fig.
- Bunt, J. S. & Tchan, Y. T.** Estimation of Protozoan populations in soils by direct microscopy. Proc. Linn. Soc. N.S.W. **80**: 148-153, fig.
- Buonomini, G. & Ricciardi, M. L. (1).** Sulla diagnosi parassitologica di amebiasi. Nota III. L'importanza dell'esame culturale delle feci. Acta med. Ital. **10**: 13-19. [English summary.]
- Buonomini, J. & Ricciardi, M. L. (2).** Osservazioni sulla coltivazione di *E. histolytica*. Acta med. Ital. **10**: 67-82. [English summary.]
- Burbank, W. D.** The biology of *Paramecium*. [Review]. Ecology **34** 1953: 651-654.
- Burgess, R. W.** see Young, M. D.
- Burma, B. H.** Studies in quantitative paleontology. III. On application of sequential analysis to the comparison of growth stages and growth series. [Foraminifera]. J. Geol. **61** 1953: 533-543, figs.
- Burnaby, T. P.** A population survey of benthonic Foraminifera from the Chalk Marl. Abstr. Diss. Univ. Camb. (1952-1953) 1955: 85-86.
- Burrells, W.** A study of freshwater Rhizopods. J. Quakett micr. Cl. (4) **4**: 196-208, figs.
- Burrows, R. B. & Klink, G. E.** *Endamoeba polecki* infections in man. Amer. J. Hyg. **62**: 156-167, figs.
- Burrows, R. B.** see Klink, G. E.
- Burrows, R. B.** see Swerdlow, M. A.
- Butcher, W. S.** Foraminifera, Coronado Bank and Vicinity, California. Scripps Inst. Oceanog. Sub. Geol. Rept. **19** 1951: 1-9.
- Buttner, A. & Bourcart, N. (1).** Sur certaines particularités biologiques d'un trypanosome de la grenouille verte *Trypanosoma mopynatum* Sergent, 1904. Ann. Parasit. hum. comp. **30**: 431-445, figs.
- Buttner, A. & Bourcart, N. (2).** Observations sur le cycle évolutif de *Trypanosoma inopinatum* Sergent, 1904. C. R. Soc. Biol., Paris **149**: 1146-1152, figs.
- Buttrey, B. W.** A comparison of the Trichomonads from the nasal cavity and cecum of swine. J. Protozool. **2** Suppl.: 2.
- Butzel, H. M. jr.** Mating type mutations in variety of *Paramecium aurelia*, and their bearing upon the problem of mating-type determination. Genetics **40**: 321-330.

Butzel, H. M. jr., & Martin, W. B. jr. Studies of amino acid constituents of *Paramecium aurelia*. Genetics 40: 565.

Callender, M. E. see McCowen, M. C.

Camin, J. H. see Hull, R. W.

Campbell, R. S. F., Martin; W. B. & Gordon, E. D. Toxoplasmosis as a complication of canine distemper. Vet. Rec. 67, 708-712 figs.

Canella, M. F. Richerche sulla microfauna delle acque interne foraresi. Introduzione alle studio dei ciliati e dei rotiferi. Publ. Mus. Stor. nat. Ferrara 4 1954: 1-154, figs.

Cantrell, W. (1). The effects of cortisone and oxphenarsine on *Trypanosoma equiperdum* infections in the rat. J. inf. Dis. 96: 259-267, figs.

Cantrell, W. (2). Agglutinating strains of trypanosomes obtained with oxphenarsine. Science 122: 200.

Cantrell, W. & Betts, G. D. Observations on the immunity to *Trypanosoma equiperdum* induced by treatment with oxphenarsine. J. Parasit. 41 Suppl.: 15-16.

Capetta, B. see Boni, A.

Capocaccia, L. Ricerche sulla coltivazione dell'*Entamoeba histolytica*. Arch. Ital. Sci. med. trop. Parassit. 36: 662-664.

Caporali, J. see Sautet, J.

Capponi, M., Sureau, P. & Deschiens, R. Présentation d'un hématozoaire observé dans le sang de *Mus norvegicus* au centre Vietnam. Bull. Soc. Path. exot. 48: 649-651, figs.

Capponi, M. see Sureau, P.

Carneri, I. de. *Trichomonas hominis* cultured without bacteria. Nature, Lond. 176: 605.

Carozzi, A. (1). Sur un Annélide tubicole dans le Séquanien supérieur du Grand Salève (Haute-Savoie). [Foraminifera.] Cah. Géol. de Thoiry 2 1950: 11-14.

Carozzi, A. (2). Contribution à l'étude micrographique de l'Albien de la région de Genève. Bull. Inst. nat. Genève 55 1951: 1-45, figs.

Carozzi, A. (3). Microfaune déplacée dans les niveaux "remaniés" du Malm supérieur de la nappe de Morels (Haute-Savoie). [Foraminifera.] Arch. sci. Soc. Phys. Hist. nat. Genève 5 1952: 39-42.

Carr, D. R. see Kulp, J. L.

Carrescia, P. M. Infekzioni da *Plasmodium berghei* in topi albini di varie età a dieta lattea. Recidive e reinoculazioni. Riv. Malariol. 34: 93-97. [English summary.]

Carrescia, P. M. & Lioy, F. Anemie da infezione da *Plasmodium gallinaceum* nei polli. Riv. Malariol. 34: 241-257 figs. [English summary.]

Carrescia, P. M. see Arcoleo, G.

Carter, F. R. M. see Brooke, M. M.

Carvalhal, S., Aguiar, A. A., Pilagalo, O. & Ferracci, A. (1). Considerações sobre o comportamento da R.F.C. (técnica qualitativa) num grupo de indivíduos seguramente não portadores de infecção chagasica. Folia clin., S. Paulo 22 1954: 65-68. [English summary.]

Carvalhal, S., Portugal, O. P., Silva, T. L. da, Ramos, O., Paladino, N. & Aguiar, A. A. (2). Considerações sobre os resultados da R.F.C. relacionados com os dados epidemiológicos relativos a endemia Chagasica. Estudos sobre indivíduos examinados sorologicamente, clínica e epidemiologicamente. Folia clin., S. Paulo 22 1954: 85-96. [English summary.]

Carvalhal, S., Younes, A., Uvo, D., Ferracci, A., Pilagalo, O. & Aguiar, A. A. (3). Estudos sobre a molestia de Chagas numa coletividade operária no município de S. Caetano do Sul Estado de São Paulo. (Considerações clínicas e epidemiológicas). Folia clin., S. Paulo 22 1954: 9-22. [English summary.]

Carvalhal, S. see Portugal, O. P.

Carvalhal, S. see Uvo, D.

- Carver, R. K.** see Goldman, M.
- Casile, M.** see Floch, H.
- Castany, G.** see Colom, G.
- Castell, C. P.** see Brown, M. M.
- Castellani, A.** Action phagocytaire et destructrice de *Hartmannella castellanii* (*Amoeba castellanii*) sur un champignon levuriforme encapsulé pathogène *Torulopsis neoformans* (*Cryptococcus neoformans*). Ann. Inst. Pasteur **89**: 1-7, figs.
- Castro, M. P. de.** Divisão multipla de *Toxoplasma* em cultura de tecidos. Arq. Inst. Biol., S. Paulo **22**: 233-241, figs. [English summary.]
- Caughey, P. A.** see Nanney, D. L.
- Cerva, L. (1).** The effect of disinfectants on the cysts of *Leishmania intestinalis*. Čsl. Parasit. **2**: 17-21. [English summary.]
- Cerva, L. (2).** Intestinal parasites of children's homes in the district of Prague. Čsl. Parasit. **2**: 22-34, figs. [English summary.]
- Céspedes, R. & Morera, P.** Balantidiosis. Rev. Biol. trop., Costa Rica **3**: 161-170, figs. [English summary.]
- Chakrabarti, A. K.** Studies on *Plasmodium berghei* n.sp. Vincke and Lips, 1948. XXI. Administration of an extract of male sex hormone to orchidectomised and non-orchidectomised albino rats with blood-induced infection and its effect on the course of infection in its different stages. Indian J. Malar. **9**: 177-183.
- Chandler, A. C.** Introduction to parasitology with special reference to the parasites of man. 9th ed. New York : xiv + 799 pp. figs.
- Chandler, A. C.** see Ray, S. M.
- Chang, P.** see Read, C. P.
- Chang, S. L.** Survival of cysts of *Endamoeba histolytica* in human feces under low-temperature conditions. Amer. J. Hyg. **61**: 103-120.
- Chang, S. L. & Baxter, M.** Studies on destruction of cysts of *Endamoeba histolytica*. I. Establishment of the order of reaction in destruction of cysts of *E. histolytica* by elemental iodine and silver nitrate. Amer. J. Hyg. **61**: 121-132, figs.
- Chang, S. L., Baxter, M. & Eisner, L.** Studies on destruction of cysts of *Endamoeba histolytica*. II. Dynamics of destruction of cysts of *E. histolytica* in water by tri-iodide ion. Amer. J. Hyg. **61**: 133-141, figs.
- Changeux, J. P. & Deboutteville, C. D.** Le Folliculinide *Pebrilla paguri* Giard, nouveau pour la Méditerranée, trouvé sur *Eupagurus prideauxi* Leach, hôte nouveau. Vie et Milieu **6**: 290.
- Chao, J.** (1). Sterile microdissection and isolation of malarial oocysts from the mosquito stomach. J. Parasit. **41** Suppl.: 32-33.
- Chao, J.** (2). Sterile microdissection and isolation of malarial oocysts. Science **122**: 763, fig.
- Chao, J. & Ball, G. H.** Quantitative microinjection of mosquitoes. [*Plasmodium*.] J. Parasit. **41** Suppl.: 32.
- Chao, P. K. (1).** Maintenance of the killer trait by kk animals in *Paramecium aurelia*, variety 4. Proc. Indiana Acad. Sci. **64**: 255-265.
- Chao, P. K. (2).** Hereditary modification of the action of macronuclear k genes in the maintenance of the killer trait in variety 4 of *Paramecium aurelia*. Genetics **40**: 567.
- Chardez, D. (1).** Protozoaires endoparasites de batraciens. Rev. Vervié. Hist. nat. **12**: 39-44, figs.
- Chardez, D. (2).** Les protozoaires d'eaux douces stagnantes. Parts I & II. Rev. Vervié. Hist. nat. **12**: 59-64, 66-70, figs.
- Chatterjee, A. K.** On an abnormal type of trybliolepidine-nucleoconch from Australia. Curr. Sci. **23** 1954: 395-396, fig.
- Chatton, M.** News—Middle East. Micropaleontology **1**: 103-104.

Chaudhuri, R. N. see Sen Gupta, P. C.

Chen, T. T. Paramecin 34, a killer substance produced by *Paramecium bursaria*. Proc. Soc. exp. Biol. 88: 541-543, figs.

Cherpak, S. E. see Bilik, A. A.

Cheylan, G., Magné, T., & Mattauer, M. Observations nouvelles sur le "flysch" au pied du Grand Pic de l'Ouarsenis (Algérie). C. R. Acad. Sci., Paris 241: 1961-63.

Cheylan, G., Magné, J., Sigal, J., & Grekoff, N. Résultats géologiques et micropaléontologiques du sondage d'El Krachem (Hauts-Plateaux algérois). Description de quelques espèces nouvelles. Bull. Soc. géol. Fr. 3 1953: 471-492, figs.

Chibalitch, D. see Simitch, T.

Chieffi, G. see Bucco, G.

Chiguryaeva, A. A. see Vostryakov, A. V.

Chiji, M. see Morishima, M.

Chiquoine, A. D. see Bonner, J. T.

Chizaka, T. Fusulinidae from Yasaka-mura, Kisen-gun, Iwate Prefecture. J. Jap. geol. Soc. 58 1952: 312-3. [Abstract in Japanese.]

Choffat, P. Géologie du Cenozoïque du Portugal. [Foraminifera]. Comm. Serv. géol. Portugal 30 (suppl.) 1950: 1-182, figs.

Choh, R. see Toriyama, R.

Christl, H. Beiträge zur Kenntnis der Panseninfusorien einheimischer Wiederkäuer. I. Gemse (*Rupicapra rupicapra* L.). Z. Parasitenk. 17: 185-192, figs.

Christy, V. L. see Henry, S. M.

Chubb, L. J. The Cretaceous succession in Jamaica. [Foraminifera.] Geol. Mag. 92: 177-195, fig.

Church, C. C. A new species of Foraminifera of the genus *Discorbis* dredged off the coast of California. Proc. Calif. Acad. Sci. 27 1952: 375-376, figs.

Cirillo, V. P. Induction and inhibition of adaptive enzyme formation in a Phytoflagellate. Proc. Soc. exp. Biol. Med. 88: 352-354, figs.

Ciry, R. A propos de *Neoschwagerina syrtalis* Douville. Bull. Soc. Sci. nat. Tunis 7 1954: 111-122, figs.

Cita, M. B. (1). Foraminiferi di un campione di fondo marino dei dintorni di Capri. Rev. ital. Paleont. 60 1954: 1-12, figs.

Cita, M. B. (2). Osservazioni micropaleontologiche su alcuni campioni raccolti nei conglomerati terziari del Bresciano. [Foraminifera.] Riv. ital. Paleont. 60 1954: 213-219.

Cita, M. B. (3). Studio della microfauna contenuta in un campione di fondo raccolto dal batiscafo "Trieste" nel Mare di Capri. Atti Soc. Ital. Sci. nat. 94: 209-221, fig.

Citri, N. & Grossowicz, N. (1). A partially defined culture medium for *Trypanosoma cruzi* and some other Haemoflagellates. J. gen. Microbiol. 12: 273-278.

Citri, N. & Grossowicz, N. (2). Growth requirements of *Leishmania tropica* and other leishmanias. Trans. R. Soc. trop. Med. Hyg. 49: 603-604.

Citri, N. see Grossowicz, N.

Clark, G. M. The development of *Hepatozoon sciuris* Coles, 1914 in two parasitic Laelapid mites. J. Parasit. 41 Suppl.: 17-18.

Clark, G. M. see Herman, C. M.

Classen, W. J. see Graham, J. J.

Clausen, J. K. Observations on the carbohydrate metabolism of the flagellates *Strigomonas oncopelti*. J. gen. Microbiol. 12: 496-502, figs.

Cloud, P. E. jr. Facies relationships of organic reefs. [Foraminifera.] Bull. Amer. Ass. Petr. Geol. 36 1952: 2125-2149, figs.

Cmejla, H. E., Herrick, C. A. & Farrar, C. L. The therapeutic value of fumagillin in the control of *Nosema apis* Zander in the honey bee. J. Parasit. 41 Suppl.: 21

- Coatney, G. R.** see Nadel, E. M.
- Cobban, W. A., & Reeside, J. B. jr.** Frontier formation, Wyoming, and adjacent areas. [Foraminifera.] Bull. Amer. Ass. Petrol. Geol. **36** 1952: 1913-1961, figs.
- Cole, A. C. E.** Amoebiasis. Medicine Illustrated, London **8** 1954: 469-473.
- Cole, G. A.** An ecological study of the microbenthic fauna of two Minnesota lakes. Amer. Midl. Nat. **53**: 213-230, fig.
- Cole, W. S.** Criteria for the recognition of certain assumed Camerinid genera. Bull. Amer. Paleont. **35** 1953: 1-22, figs.
- Cole, W. S., & Bridge, J.** Geology and larger foraminifera of Saipan Island. Prof. Pap. U.S. geol. Surv. **253** 1953: 1-54, figs.
- Cole, W. S., & Herrick, S. M.** Two species of larger foraminifera from Paleocene beds in Georgia. Bull. Amer. Paleont. **30** 1953: 1-16, gs.
- Cole, W. S.** see Ladd, H. S.
- Coleman, N.** see Eyles, D. E.
- Collier, A.** see Wilson, W. B.
- Colom, G. (1).** Arqueomonadineas, siliconflagelados, discoasteridos fosiles de España. An. Asoc. esp. Progr. Cienc. **5** (2) 1940: 343-356, figs.
- Colom, G. (2).** Estudios sobre las microfaunas de algunas cuencas marinas internas Mio-Pliocenas de la cordillera Subbética. Bol. Soc. esp. Hist. nat., Secc. Geol. **49** 1951: 157-191, figs.
- Colom, G. (3).** Jurassic-Cretaceous pelagic sediments of the western Mediterranean zone and the Atlantic area. Micropaleontology **1**: 109-124, figs.
- Colom, G., Castany, G., & Delga, M. D.** Microfaunes pélagiques (Calpionelles, Fissurines) dans le NE de la Berbérie. Bull. Soc. géol. Fr. **3** 1953: 517-534, figs.
- Conato, V.** Sulla presenza del genere *Globigerinata* Brönnimann nel Neogene italiano. Rev. Ital. Paleont. **60** 1954: 29-32, fig.
- Conner, R. L., & Wagtendonk, W. J. van.** Steroid requirements of *Paramecium aurelia*. J. gen. Microbiol. **12**: 31-36, figs.
- Conrad, W. & Kufferath, H.** Recherches sur les eaux saumâtres des environs de Lillov. II. Partie descriptive: Algues et protistes. Considérations écologiques. Mém. Inst. Sci. nat. Belg. **127** 1954: 1-846, figs.
- Cook, M. K.** see Jacobs, L.
- Cooper, W.** see Garnham, P. C. C.
- Corby, G. W.** Geology and oil possibilities of the Philippines. [Foraminifera.] Tech. Bull. Dept. Agr. & Nat. Res. Philippines **21** 1951: 1-363, figs.
- Corliss, J. O. (1).** On the systematic position of the enigmatic Opalinid infusorians. Anat. Rec. **122**: 434.
- Corliss, J. O. (2).** The Opalinid infusorians: flagellates or ciliates? J. Protozool. **2**: 107-114.
- Corliss, J. O. (3).** Evolution and systematics of the ciliated protozoa. J. Protozool. **2** Suppl.: 5-6.
- Corliss, J. O. (4).** Proposed uniformity in naming "mouth parts" in ciliates. J. Protozool. **2** Suppl.: 12.
- Corliss, J. O. & Dougherty, E. C.** Considerations of the generic name *Tetrahymena* as a *nomen conservandum*. J. Protozool. **2** Suppl.: 6.
- Corradetti, A.** Studies on comparative pathology and immunology in *Plasmodium* infections of mammals and birds. Trans. R. Soc. trop. Med. Hyg. **49**: 311-338, figs.
- Corradetti, A., Tentori, L. & Verolini, F.** Osservazioni sull'infezione da *Plasmodium berghei* in ratti tenuti a dieta lattea. R. C. Ist. super. Sanita, Rome **18**: 256-260. [English summary.]
- Cosanday, F.** Etude hydrobiologique du lac de Bret. Schweiz. Z. Hydrol. **17**: 1-86, figs.
- Costa, L.** see Lucena, D. T. de.
- Courtey, B.** see Mugard, H.

Coutts, W. E., Vargas-Salazar, R., Silva-Inzunza, E., Olmedo, R., Turteltaub, R. & Saavedra, J. Trichomonas vaginalis infection in the male. Brit. med. J. 2: 885-894, figs.

Cowan, A. B. (1). Development of megaloschizonts of *Leucocytozoon simondi* Mathis and Léger, 1910, and some host reactions. J. Parasit. 41 Suppl.: 34-35.

Cowan, A. B. (2). The development of megaloschizonts of *Leucocytozoon simondi* Mathis and Léger. J. Protozool. 2: 158-167, figs.

Cowey, J. B. A new species of sporozoan? Nature, London. 176: 213, figs.

Cowperthwaite, J. see Nathan, H. A.

Crema, A. & Gaffuri, P. Azione della tetraciclina sulla toxoplasmosi sperimentale. Boll. Soc. Ital. Biol. sper. 31: 346-349.

Crespin, I. (1). The Cape Range structure of Western Australia. Part II. Micropalaontology. Bull. Bur. Min. Res. Aust. Dept. Nat. Dev. 21 1953: 43-75, figs.

Crespin, I. (2). News—Australia. Micropaleontology 1: 106-107.

Crespin, I. (3). A bibliography of Australian foraminifera. Micropaleontology 1: 172-188.

Crespin, I. see Roggatt, H. G.

Cuckler, A. C. & Malanga, C. M. (1). Studies on drug resistance in coccidia. J. Parasit. 41: 302-311.

Cuckler, A. C. & Malanga, C. M. (2). The effect of nicarbazin on avian coccidia. J. Parasit. 41 Suppl.: 19.

Cummings, R. H. (1). *Nodosinella* Brady 1876, and associated Upper Palaeozoic genera. Micropaleontology 1: 221-238, figs.

Cummings, R. H. (2). New genera of Foraminifera from the British Lower Carboniferous. J. Wash. Acad. Sci. 40: 1-8, figs.

Cummings, R. H. (3). *Stacheoides*, a new foraminiferal genus from the British Upper Paleozoic. J. Wash. Acad. Sci. 40: 342-346, figs.

Curtis, N. M. C. jr. Paleoecology of the Viesca member of the Weches formation at Smithville, Texas. J. Paleont. 29: 263-282, figs.

Cuvillier, J. (1). Sur l'anticlinal de Tercis (Landes). [Foraminifera.] Bull. Soc. Hist. nat. Toulouse 80 1951: 249-250.

Cuvillier, J. (2). Correlations stratigraphiques par microfacies en Aquitaine occidentale. [Foraminifera.] Proc. Third World Pet. Congr. 1 1951: 446-448.

Cuvillier, J. (3). News—France. Micropaleontology 1: 290-292.

Cuvillier, J. see Gubler, Y.

Dagert, C. see Scorza, J. V.

Dajani, S. W. see Alicata, J. E.

Dalbiez, F. The genus *Globotruncanina* in Tunisia. Micropaleontology 1: 161-171, figs.

Daleon, B. A. The sub-surface geology and Tertiary micropalaontology of Northern Cebu. [Foraminifera.] Philippine Geol. 5 1951: 1-11, fig.

Dalton, A. J. see Gatenby, J. B.

Dam, A. ten. Sedimentation facies and stratigraphy in the Neogene basin of Iskenderum. Bull. geol. Soc. Turkey 3 1952: 49-64, figs.

Danforth, W. Effect of growth conditions on acetate oxidation by *Euglena*. J. Protozool. 2 Suppl.: 2.

Daniels, E. W. (1). Cell division in the giant amoeba, *Pelomyxa carolinensis*, following X-irradiation. II. Analysis of therapeutic effects after fusion with non-irradiated cell portions. J. exp. Zool. 127 1954: 427-461, figs.

Daniels, E. W. (2). X-irradiation of the giant amoeba, *Pelomyxa illinoiensis*. I. Survival and cell division following exposure; therapeutic effects of whole protoplasm. J. exp. Zool. 130: 183-197, fig.

Das, S. M. & Tewari, H. B. Golgi apparatus in *Amoeba verrucosa* Ehrenberg. *Curr. Sci.* **24**: 58-59, figs.

Das Gupta, N. N. see Ray, H. N.

Dass, C. M. S. see Seshachar, B. R.

Davenport, H. A. see Honigberg, B. M.

David, A. & Nair, C. P. Observations on a natural (cryptic)infection of trypanosomes in sparrows (*Passer domesticus* Linnaeus). I. Susceptibility of birds and mammals to the trypanosomes. *Indian J. Malar.* **9**: 95-98.

Davidson, G. Further studies of the basic factors concerned in the transmission of malaria. *Trans. R. Soc. trop. Med. Hyg.* **49**: 399-350.

Davies, S. F. M. & Joyner, L. P. Observations on the parasitology of deep litter in poultry houses. [Coccidia.] *Vet. Rec.* **67**: 193-197, figs.

Davis, A. G. In J. N. Carreck: The Quaternary Deposits of Bowleaze Cove, near Weymouth, Dorset. *Proc. Geol. Assoc. Lond.* **66**: 74-100, figs.

Davis, L. R., Boughton, D. C. & Bowman, G. W. The endogenous development of *Eimeria alabamensis* Christensen, 1941, an intranuclear coccidium of cattle. *J. Protozool.* **2 Suppl.**: 8.

Davis, R. J. Growth of "high temperature" strains of *Tetrahymena pyriformis* in chemically defined media. *J. Protozool.* **2 Suppl.**: 10

Dawson, C. E. Observations on the incidence of *Dermocystidium marinum* infection in oysters of Apalachicola Bay, Florida. *Texas J. Sci.* **7**: 47-56, figs.

Day, C. M. S. Studies on the nuclear apparatus of peritrichous ciliates. Part III. The nuclear apparatus of *Epistylis* sp. *Proc. nat. Inst. Sci. India* **20** 1954: 703-715, figs.

De, M. L. see Ray, H. N.

Deane, L. M. & Deane, M. P. Observações preliminares sobre a importância comparativa do homem, do cão e da raposa (*Lycalopex vetulus*) como reservatórios da *Leishmania donovani*, em área endêmica de Calazar, no Ceará. Hospital, Rio de Jan., July 1955: 61-76, figs. [English summary.]

Deane, L. M. see Deane, M. P.

Deane, M. P. & Deane, L. M. Observações sobre a transmissão da leishmaniose visceral no Ceará. Hospital, Rio de Jan., Sept. 1955: 347-364. [English summary.]

Deane, M. P. see Deane, L. M.

Deblock, S. see Doby, J. M.

Debourle, A. Jean Le Calvez (1908-1954). *Micropaleontology* **1**: 191-193.

Deboutteville, C. D. Eaux souterraines littorales de la côte Catalane Française—(Mise au point faunistique). *Vie et Milieu* **5**: 408-451.

Deboutteville, C. D. see Changeux, J. P.

Dechary, J. M. see Kun, E.

Decima, F. P., & Ferasin, F. Nuove specie di foraminiferi nell'Eocene del Monte Ceva (Collie Euganei). *Rev. Ital. Paleont.* **60** 1954: 247-253, figs.

Deckart, M. Einzeller als Wirtstiere von Parasiten. *Mikrokosmos* **44**: 265-267, figs.

Decloitre, L. *Speologica africana*: Thécamoebiens de la grotte des Singes à Séguéa (Guinée). *Bull. Inst. franç. Afr. noire* **17**: 989-1019, figs.

Deegan, T. The metabolism of iron in malaria. The nature of haemozoin (*Plasmodium knowlesi*). *Trans. R. Soc. trop. Med. Hyg.* **49**: 1-2.

Deegan, T. see Maegraith, B. G.

Deflandre, G. see Braarud, T.

Degenhardt, E. F. & Fennell, R. A. Localization, substrate specificity, and the effect of inhibitors on the alkaline phosphatases of *Tetrahymena geleii*. *J. Protozool.* **2 Suppl.**: 4.

DeLamater, J. N. *see* Blumenthal, H.

DeLamater, J. N. *see* Hallman, F. A.

Delga, M. D. Présence du Burdigalien dans la région d'El Milia, au centre du massif ancien de Petite Kabylie (Nord-Constantinois, Algérie). [Foraminifera.] C. R. Acad. Sci., Paris. **234** 1952 : 2092-2095.

Delga, M. D., & Magné, J. Note préliminaire sur la Néogène du bassin de Djidjelli (Nord-Constantinois, Algérie). [Foraminifera.] C. R. Soc. géol. Fr. **1902** : 224-227.

Delga, M. D., & Sigal, J. Stratigraphie du complexe marneaux "crétacé supérieur" dans le Nord-Constantinois (Algérie). C. R. Acad. Sci., Paris **234** 1952 : 115-117.

Delga, M. D. *see* Colom, G.

Dellaert, R. *see* Rodhain, J.

Delwiche, E. A. Metabolism of micro-organisms. Annu. Rev. microbiol. **9** : 145-172.

Deom, J. & Mortelmans, J. Sur la sensibilité *in vitro* de *Trichomonas gallinae* et *Trichomonas fetus* à la néomycine et à la viomycine. Ann. Inst. Pasteur **88** : 521-522.

Deschiens, R. *see* Capponi, M.

Desowitz, R. S. & Fairbairn, H. The influence of temperature on the length of the developmental cycle of *Trypanosoma vivax* in *Glossina palpalis*. Ann. trop. Med. Parasit. **49** : 161-163.

Devignat, R. & Dresse, A. Micro-technique simple et rapide de concentration du sang en trypanosomes. Ann. Soc. Belge Méd. trop. **35** : 315-321.

Dias, E. (1). Índices de infecção dos transmissores da doença de Chagas no município de Bambuí, Minas Gerais. Rev. Brasil. Malar. Doenç. trop. **4** 1954 : 607-610.

Dias, E. (2). Doença de Chagas nas Américas. VIII. Argentina. Rev. Brasil. Malar. Doenç. trop. **7** : 143-175.

Diaz, M. *see* Pizzi, T.

Diaz Vasquez, A. *see* Torrealba, J. F.

Dippell, R. V. Some cytological aspects of ageing in variety 4 of *Paramecium aurelia*. J. Protozool. **2** Suppl. : 7.

Dissanaika, A. S. (1). I. A new genus of schizogregarine from the fat body of the flour beetle, *Tribolium castaneum*. II. Microsporidian infections in tapeworms: instances of hyperparasitism. Trans. R. Soc. trop. Med. Hyg. **49** : 294-295.

Dissanaika, A. S. (2). A new schizogregarine *Triboliocystis garnhami* n.g., n.sp., and a new microsporidian *Nosema buckleyi* n.sp., from the fat body of the flour beetle *Tribolium castaneum*. J. Protozool. **2** : 150-156, figs.

Dissanaika, A. S. D. (3). Emergence of the sporoplasm in *Nosema helminthorum*. Nature, London **175** : 1002-1003, fig.

Dittmar, H. Ein Sauerlandbach. Untersuchungen an einem Wiesen-Mittelgebirgsbach. Arch. Hydrobiol. **50** : 305-552, figs.

Dmitrieva, P. G. [On the nature of the "Marls with pelecypods" of the Miocene deposits of the Western pre-Caucasus.] [Foraminifera.] Dokl. Akad. Nauk USSR. **82** 1952 : 297-299.

Doby, J. M. & Deblock, S. Toxoplasmose expérimentale des voies aériennes. Bull. Soc. Pharm. Lille 1954 (2) : 34-38, figs.

Doby, J. M., Deblock, S. & Doby-Dubois, M. Toxoplasmose expérimentale. Bull. Soc. Pharm. Lille 1955 (2) : 133-139, figs.

Doby-Dubois, M. *see* Doby, J. M.

Dodds, S. E. & Elsdon-Dew, R. Further observations on human coccidioidosis in Natal. S. Afr. J. Lab. clin. Med. **1** : 104-109, figs.

Doebel, F. Mikropaläontologische Untersuchungen an der Grenze Rupelton-Schleichsand (Mitteloligozän). [Foraminifera.] Deuts. geol. Ges. Z. **103** 1951 [1952] : 147.

Dollé, J. E. *see* Arnould, M.

Dollfus, R. P. Cnidosporidie chez un thon. *Thunnus thynnus* (L.) de l'Atlantique marocain. C. R. Soc. Sci. nat. Maroc **21**: 92-95, figs.

Donovan, A. J. & Schipper, A. L. Some effects of colchicine upon the reproduction of *Paramecium caudatum*. Proc. Indiana Acad. Sci. **64**: 255.

Donze, P., & Rosset, J. Présence de "calcaires grossiers" dans le Berriasien de la chaîne de Aravis (Hte. Savoie). [Foraminifera.] C. R. Soc. géol. Fr. **1952**: 322-324.

Dougherty, E. C. see Corliss, J. O.

Dragesco, J., Blanc-Brude, R. & Gauchery, M. Anhydriobiose chez un infusoire tentaculifère : *Heliophyrya erhardi* (Rieder) Matthes. Mikroskopie **10**: 262-266, figs.

Dragesco, J., Blanc-Brude, R. & Skreb, Y. Morphologie et biologie d'un tentaculifère peu connu : *Heliophyrya erhardi* (Rieder) Matthes. Bull. Microsc. appl. (2) **5**: 105-112, figs.

Dragesco, J. see Blanc-Brude, R.

Dresse, A. see Devignat, R.

Drooger, C. W. Two species of *Miogypsina* from southern Peru. Bol. Soc. geol. Peru **25** 1949: 9-15, figs.

Drooger, C. W., Kaasschieter, J. P. A., & Key, A. J. The microfauna of the Aquitanian-Burdigalian of northwestern France. [Foraminifera.] Verh. Akad. Wet. Amst. Afd. Natuurk. **21**: 1-136.

Droop, M. R. Some new supralittoral Protista. J. mar. Biol. Ass. U.K. **34**: 233-245, figs.

Ducoff, H. S. Growth of *Tetrahymena pyriformis* after incubation in incomplete media. J. Protozool. **2** Suppl.: 5.

Dufour, J. Facies shift and isochronous correlation. [Foraminifera.] Proc. Third World Pet. Congr. **1** 1951: 428-438, figs.

Dunnington, H. V. Close zonation of Upper Cretaceous globigerinal sediments by abundance ratios of *Globotruncana* species groups. Micropaleontology **1**: 207-219, figs.

Durand, P. & Mathis, M. (1). Sensibilité de trois rongeurs tunisiens, *Mus musculus spreatus*, *Dipodillus campestris* et *Meriones shawi* au *Plasmodium berghei* Vincke et Lips 1948. Arch. Inst. Pasteur Tunis **32**: 17-24.

Durand, P. & Mathis, M. (2). Evolution normale de l'infection à *Plasmodium berghei* chez la souris soumise au régime lacté. Arch. Inst. Pasteur Tunis **32**: 313-316.

Durchon, M. see Lafon, M.

Dutta, B. N. see Sen, H. G.

Dutta, B. N. see Sen Gupta, P. C.

Dyakonova-Savelyeva, E. N. [Genesis and the stratigraphic position of the red deposits of the Northern Caucasus arising from the finding of higher Fusulinids.] Trud. Leningrad Soc. Nat. **68** 1951: 102-149. [In Russian.]

Eadie, J. M. & Oxford, A. E. Factors involved in the production of a novel kind of derangement of storage mechanism in living Holotrich ciliate protozoa from sheep rumen. J. gen. Microbiol. **12**: 298-310, figs.

Eames, F. E. The Miocene/Oligocene boundary in the Caribbean Region. [Foraminifera.] Geol. Mag. **92**: 86.

Eames, F. E., & Kent, P. E. Miocene beds of the East African coast. [Foraminifera.] Geol. Mag. **92**: 338-344, fig.

Eames, F. E., & Smout, A. H. Complanate Alveolinids and associated foraminifera from the Upper Cretaceous of the Middle East. Ann. Mag. nat. Hist. (12) **8**: 505-512, figs.

Echols, D. J. News—Mid-Continent, United States. Micropaleontology **1**: 98-100.

Edgar, S. A. Sporulation of oocysts at specific temperatures and notes on the prepatent period of several species of avian Coccidia. J. Parasit. **41**: 214-216.

Egelhaaf, A. Cytologisch-entwicklungs-physiologische Untersuchungen zur Konjugation von *Paramecium bursaria* Focke. Arch. Protistenk. **100**: 447-514, figs.

- Egeran, N.** *see Tasman, C.*
- Eglitis, V. K.** [Soil fauna of the Latvian S.S.R.] Riga 1954 : 1-262, figs.
- Eguchi, M.** *see Yabe, H.*
- Ehret, C. F.** *see Powers, E. L.*
- Eichel, H. J. (1).** Further studies on the succinate-oxidizing system of *Tetrahymena*. *J. Protozool.* **2** Suppl.: 13.
- Eichel, H. J. (2).** Some properties of the DPNH oxidase of *Tetrahymena*. *J. Protozool.* **2** Suppl.: 13.
- Einov, O. L. (1).** [On the stratigraphy of the Visean of Upper Bashkiria.] [Foraminifera.] *C. R. Acad. Sci. URSS.* **103** : 689-692. [In Russian.]
- Einov, O. L. (2).** [The Bashkirian Horizon in Upper Bashkiria.] [Radiolaria.] *C. R. Acad. Sci. URSS.* **104** : 131-133. [In Russian.]
- Eisenack, A. (1).** Mikrofossilien aus Phosphoriten des samländischen Unteroligozäns und über die Einheitlichkeit der Hystrichosphaeriden. *Palaentographica A.* **105** 1954 : 49-95, figs.
- Eisenack, A. (2).** Chitinozoen, Hystrichosphären und andere Mikrofossilien aus dem Beyrichia-Kalk. *Senckenbergiana, Lethaea* **36** : 157-188, figs.
- Eisenack, A. (3).** Neue Chitinozoen aus dem Silur des Baltikums und dem Devon der Eifel. [Protista incertae sedis.] *Senckenbergiana, Lethaea* **36** : 311-319, figs.
- Eisner, L.** *see Chang, S. k.*
- Elder, S.** *see Ion, D. C.*
- Ellenberger, F., Lemoine, M., & Sigal, J.** Sur l'âge des marbres en plaquettes du Briançonnais et des marbres chloriteux de la Vanoise. [Foraminifera.] *C. R. Soc. géol. Fr.* **1952** : 205-207.
- Elliott, A. M. & Hayes, R. E. (1).** *Tetrahymena* from Mexico-Panama, and Colombia, with special reference to sexuality. *J. Protozool.* **2** : 75-80, figs.
- Elliott, A. M. & Hayes, R. E. (2).** Strains of *Tetrahymena pyriformis* that grow without serine. *J. Protozool.* **2** Suppl.: 8.
- Elliott, R. H. J., & Kim, O. J.** Pennsylvanian Reef Limestone, Terry County, Texas. [Foraminifera.] *Quart. J. Colorado Sch. Mines* **47** 1952 : 71-93.
- Ellis, B. F., D. Dale Condit (1886-1955).** *Micropaleontology* **1** : 288, figs.
- Ellison, S. P. jr.** Value of micro-fossil census studies. [Foraminifera.] *Bull. geol. Soc. Amer.* **63** 1952 : 1247.
- Elsdon-Dew, R.** *see Dodds, S. E.*
- Elslinger, E. F.** *see Thompson, P. E.*
- Emery, K. O., & Rittenberg, S. C.** Early diagenesis of California Basin sediments in relation to origin of oil. *Bull. Amer. Ass. Petr. Geol.* **36** 1952 : 735-806, figs.
- Emiliani, C. (1).** The Oligocene microfauna of the central part of the northern Apennines. *Palaeontogr.ital.* **48** (n.s. 18) 1954 : 77-184, figs.
- Emiliani, C. (2).** Mineralogical and chemical composition of the tests of certain pelagic foraminifera. *Micropaleontology* **1** : 377-380, figs.
- Endo, R.** Stratigraphical study of the Omi limestone from the standpoint of Foraminifera and calcareous algae. *J. geol. Soc. Japan* **58** 1952 : 320-321. [Abstract in Japanese.]
- Enjumet, M.** *see Hollande, A.*
- Entner, N. & Hall, N. C.** Some aspects of carbohydrate metabolism of *Endamoeba histolytica*. *Exper. Parasit.* **4** : 92-99, figs.
- Erguvanli, K.** [Sections through the Pontides between Trabzon and Gümüşhane.] [Foraminifera.] *Bull. geol. Soc. Turkey* **3** 1952 : 65-68. [In Turkish.]
- Erhardova, B. (1).** Neue Gregarien aus Milben. *Čsl. Parazit.* **2** : 35-37, fig. [German summary.]
- Erhardova, B. (2).** *Hepatozoon microti* Coles, 1914 bei unseren kleinen Säugetieren. *Folia Biol. Prague* **1** : 282-287, figs.

Erhardova, B. (3). Nachweis toxoplasmaähnlicher Parasiten bei der Rötelmaus *Clethrionomys glareolus*. *Folia Biol.*, Prague **1** : 381-382.

Erichsen, S. see Harboe, A.

Ericson, D. B., Ewing, M., & Heezen, B. C. Turbidity currents and sediments in North Atlantic. [Foraminifera.] *Bull. Amer. Ass. Petr. Geol.* **36** 1952 : 489-511.

Ericson, D. B., Wollin, G., & Wollin, J. Coiling direction of *Globorotalia truncatulinoides* in deep-sea cores. *Deep-Sea Res.* **2** : 152-158, figs.

Erk, A. S. News—Turkey. *Micro-paleontology* **1** : 203-204.

Erth, M. Beitrag zur Erkennen der Wurzelfüsslers-Fauna der Donau. *Biológica, Bratislava* **9** 1954 : 607-616, figs. [German summary.]

Euzéby, J. La réunion mixte O.I.E.—F.A.O. sur les parasitoses animales dans les pays méditerranéens. (Rome, 4-7 novembre 1954). *Ann. Parasit. hum. comp.* **30** : 150-153.

Evans, F. R. Survey of the caecal flagellates of the Antelope ground squirrel, *Citellus leucurus leucurus*. *J. Protozool.* **2** Suppl.: 1-2.

Evenson, C. G. Formational and drilling characteristics of Cretaceous rocks, "Big Bend District", Texas-Mexico. [Foraminifera.] *Bull. geol. Soc. Amer.* **63** 1952 : 1327.

Eventor, T. S. see Starobinetz, E. Y.

Ewing, M. see Ericson, D. B.

Eyles, D. E. & Coleman, N. Relationship of size of inoculum to time of death in mice infected with *Toxoplasma gondii*. *J. Parasit.* **41** Suppl.: 120.

Eyles, D. E. see Jeffery, G. M.

Eyles, D. E. see Young, M. D.

Fabiani, G. & Orfila, J. (1) Apparition de l'immunité contre *Plasmodium berghei* chez les souris soumises au régime lacté ou à la sulfamidothérapie. *Ann. Inst. Pasteur* **88** : 108-111.

Fabiani, G. & Orfila, J. (2) Influence de la splénectomie sur le paludisme expérimental à *Plasmodium berghei* de la souris blanche. *C. R. Soc. Biol.*, Paris **149** : 87-90.

Fabiani, G. & Orfila, J. (3) Etude physiologique des surrénales dans le paludisme expérimental de la souris blanche. *C. R. Soc. Biol.*, Paris **149** : 674-677.

Fabiani, R. Trattato di geologia. Roma. 741 pp., figs., 1952. [Protozoa.]

Facca, G. Three gas-bearing fields in the Po Valley (North Italy). [Foraminifera.] *Proc. Third World Pet. Congr.* **1** 1951 : 256-265.

Fairbairn, H. & Watson, H. J. C. The transmission of *Trypanosoma vivax* by *Glossina palpalis*. *Ann. trop. Med. Parasit.* **49** : 250-259, figs.

Fairbairn, H. see Desowitz, R. S.

Fairbairn, H. see Willett, K. C.

Fallis, A. M., Anderson, R. C. & Bennett, G. F. Further observations on the transmission and development of *Leucocytòzoon simondi* M. & L. J. *Parasit.* **41** Suppl.: 19-20.

Fallot, P. see Fauré-Fremiet, A.

Farioli, A. Richerche micro-paleontologiche sul Calabriano di S. Colombano al Lambro (Milano). [Foraminifera.] *Riv. Ital. Paleont.* **60** 1954 : 221-242, figs.

Farmer, J. N. see Becker, E. R.

Farrar, C. L. see Cmejla, H. E.

Fauré-Fremiet, A. & Fallot, P. Feuilles de Saint-Etienne-de-Tinée et Saint-Martin-Vesubie au 50,000. Observations sur le Nummulitique des abords S.O. de Saint-Etienne-de-Tinée et du Nord du Tournairet. [Foraminifera.] *Bull. Serv. Carte géol. dét. France* **226** 1950 : 119-131, figs.

Fauré-Fremiet, E. (1). Morphogénèse de bipartition chez *Urocen-trum turbo* (Cilié Holotrichie). *J. Embryol. exp. Morph.* **2** 1954 : 227-238, figs.

Fauré-Fremiet, E. (2). Les problèmes de la différenciation chez les protistes. *Bull. Soc. zool. Fr.* **79** : 311-329.

Fauré-Fremiet, E. (3). *Amphisiella lithophora* n.sp. Cilié Hypotrichie psammobie. Bull. Soc. zool. Fr. 79 : 473-479, figs.

Fauré-Fremiet, E. (4). La position systematique du genre *Balantidium*. J. Protozool. 2 : 54-58, figs.

Fauré-Fremiet, E. & Breton-Gorius, A. Microscopie électronique des membranelles vibratiles de quelques ciliés. C. R. Soc. Biol., Paris 149 : 872-873.

Fauré-Fremiet, E., & Rouiller, C. Microscopie électronique des structures ectoplasmiques chez les ciliés du genre *Stentor*. C. R. Acad. Sci., Paris 241 : 678-680.

Fauré-Fremiet, E. & Tuffrau, M. *Sonderia labiata*, n.sp., cilié trichostome psammobie. Hydrobiologia 7 : 210-218, figs.

Felix, M. D. see Gatenby, J. B.

Fendall, N. R. E. see McKinnon, J. A.

Fennell, R. A. see Degenhardt, E. F.

Ferasin, F. see Decima, F. P.

Ferracci, A. see Carvalhal, S.

Ferreira, J. M. News—Portugal. Micropaleontology 1 : 296.

Ferreira, J. M. see Rocha, A. T.

Feugueur, L. & Marie, P. Observations sur les niveaux de sables glauconieux à facies albien du Sud du Lac d'Annecy (Haute-Savoie). [Foraminifera.] C. R. Soc. géol. Fr. 1952 : 355-358.

Feugueur, L. see La Calvez, Y.

Feyling-Hanssen, R. W. (1) Late-Pleistocene foraminifera from the Oslofjord area, Southeast Norway. Norsk geol. Tidsskr. 33 1954 : 109-152, figs.

Feyling-Hanssen, R. W. (2) The stratigraphic position of the Quick Clay at Bekkelaget, Oslo. [Foraminifera.] Norsk geol. Tidsskr. 33 1954 : 185-196, figs.

Feyling-Hanssen, R. W. (3) Late-Pleistocene deposits at Kapp Wijk, Vestspitsbergen. Skr. norsk Polarinst. 108 : 1-21, figs.

Fidler, J. H. see Wagstaffe, R.

Figge, F. H. J. & Wichtermann, R. Effect of hematoporphyrin on X-radiation sensitivity in *Paramecium*. Science 122 : 468-469, fig.

Finger, I. The inheritance of ciliary antigens in *Paramecium aurelia*, variety 2. Genetics 40 : 572.

Finlay, H. J. (1). Fossil foraminifera from Campbell Island. Cape Exped. Ser. Bull. 3 1950 : 45-47.

Finlay, H. J. (2). Microfaunal notes on matrices associated with fossil penguin bones. [Foraminifera.] New Zealand geol. Surv. Pal. Bull. 20 1952 : Appendix, 58-64.

Finley, H. E. Electron microscopical observations on *Spirostomum ambiguum*. Ann. N.Y. Acad. Sci. 62 : 229-246, figs.

Finley, H. E., Harrison, D. M. & Sutton, W. W. Paper electrophoresis of *Vorticella* derivatives. J. Protozool. 2 Suppl.: 1.

Finley, H. E. & Williams, H. B. Chromatographic analysis of the asexual and sexual stages of a ciliate (*Vorticella microstoma*). J. Protozool. 2 : 13-18, figs.

Firtion, F. Sur le "Grès médioliasique" du Fossé rhénan. [Foraminifera.] Ann. Univ. Sarav. naturw. Sci. 2 1953 : 87-91, figs.

Fitzgerald, N. see McCarthy D. D.

Fitzgerald, P. R., Johnson, A. E., Thorne, J. & Hammond, D. M. Experimental infections of the bovine genital tract with Trichomonads from swine. J. Parasit. 41 Suppl.: 17.

Flewett, T. H. see Fulton, J. D.

Floch, H. Discussions sur la leishmaniose cutanéo-muqueuse et la filariose clinique. Arch. Inst. Pasteur Guyane Franç. No. 351 (sep. pag.).

Floch, H. & Casile, M. Intra-dermo-réaction de Monténégro à la leishmanine. Bull. Soc. Path. exot. 48 : 636-642.

Flores, G. Geology of northern British Honduras. [Foraminifera.] Bull. Amer. Ass. Petr. Geol. **36** 1952: 404-409, figs.

Förster, H. & Wiese, L. Gamonwirkung bei *Chlamydomonas reinhardi*. Z. Naturf. **10B**: 91-92.

Fonseca, J. R. C. see Wykoff, D. E.

Fowle, C. D. see Holling, J. ..

Fox, S. K. Cretaceous foraminifera from the Greenhorn, Carlile and Cody Formations, South Dakota, Wyoming. Prof. Paper U.S. Geol. Surv. **254-E** 1954: 97-104, figs.

Frajola, W. J. see Greider, M. H.

Franco, A. & Mühlfordt, H. Protozooses intestinais no Arquipélago de Cabo Verde. (1) Ilha de S. Vicente. An. Inst. Med. trop., Lisbon **12**: 593-631 figs. [English summary.]

Franco, A. S. Coccidiosis intestinal en aves de Corral. Rev. Iber. Parasit. **15**: 85-98, figs. [English summary.]

Freitas, J. L. P. de see Nussen-zweig, V.

Frénguelli, J. Analisis microscopica de una segunda serie de muestras de la turbera del Rio de la Mision, Rio Grande, Tierra del Fuego. Extraidas por el Dr. Väinö Auer. Ann. Acad. Sci. fenn. **3A** (34) 1953: 1-52, figs.

Frick, L. P. & Moon, A. P. Parasitologic studies in the Far East. XV. A preliminary survey for intestinal parasitism in Southern Formosa. J. Parasit. **41** Suppl.: 49.

Fridman, R. Sur le lambeau de Lutetien de Saint-Palais (Charente Maritime). [Foraminifera.] C. R. Soc. géol. Fr. **1952**: 346-348.

Friese, H. Zur Foraminiferen-Fauna der Meeresmolasse des unteren Inngebietes. Abh. Geol. Dienst., Berlin **227** 1951: 1-52, figs.

Frizzell, D. L. Handbook of Cretaceous foraminifera of Texas. Rept. Invest. Tex. Bur. econ. Geol. **22** 1954: 1-232, figs.

Fromentin, H. Essais de création d'une souche "hybride" par mélange de trypanosomes polymorphes d'espèces différentes. Bull. Soc. Path. exot. **48**: 414-421.

Frye, W. W. Nutrition and intestinal parasitism. [Incl. protozoa.] Ann. N.Y. Acad. Sci. **63**: 175-185.

Frye, W. W. see Brooke, M. M.

Fujimoto, H. Fossil zones of Carboniferous and Permian in Japan. [Foraminifera.] J. geol. Soc. Japan **58** 1952: 318. [In Japanese.]

Fujimoto, H. & Kawada, S. *Triticites* zone found in Orni-limestone, Niigata Prefecture. J. geol. Soc. Jap. **57** 1951: 266-267.

Fujimoto, H. see Kawada, S.

Fujimoto, H. see Yamada, H.

Fukuda, O., & Shinogi, R. Stratigraphical and micropaleontological study of the Nishikatsura group. [Foraminifera.] J. geol. Soc. Japan **58** 1952: 191-202, figs. [English summary.]

Fukuda, S., & Shinogi, M. Miocene *Cyclammina* from Uenohara, Yamanashi Prefecture. J. geol. Soc. Japan **57** 1951: 255. [In Japanese.]

Fulton, J. D. & Flewett, T. H. Electron microscope studies in malaria. Trans. R. Soc. trop. Med. Hyg. **49**: 302.

Fulton, J. D. & Grant, P. T. The preparation of a strain of *Trypanosoma rhodesiense* resistant to stilbamidine and some observations on its nature. Exper. Parasit. **4**: 377-386, figs.

Fulton, J. D. & Spooner, D. F. The biochemistry and nutrition of *Plasmodium berghei*. Indian J. Malar. **9**: 161-176.

Gaarder, K. R., Markali, J., & Ramsjell, E. Further observations on the coccolithophoroid *Calciopappus caudatus*. Avh. norske Vidensk. Akad. I. Math.-Nat. Kl. **1954**: 1-10 figs.

Gabrielyan, A. A. [The sequence of the Palaeogene in Armenia.] [Foraminifera.] C. R. Acad. Sci. U.R.S.S. **105**: 790-793. [In Russian.]

- Gaffuri, P.** see Crema, A.
- Gaither, N.** see Kimball, R. F.
- Galliard, H.** see Vauzel, M.
- Gallitelli, E. M.** *Schackoinea* from the Upper Cretaceous of the northern Apennines, Italy. *Micropaleontology* 1: 141-146, figs.
- Ganapati, P. N. & Narasimhamurti, C. C.** Cytoplasmic inclusions of the gregarine *Grebnekiella pixellae*, parasitic in the gut of *Scolopendra morsitans*. I. Paraglycogen. *J. zool. Soc. India* 7: 53-56, fig.
- Gandolfi, R.** A *Globotruncana* fauna from the Pecan Gap chalk of Texas. *Micropaleontology* 1: 257-259, figs.
- Ganss, O. & Knipscheer, H. C.** G. Das Alter der Nierentaler und Zwieselalnschichten des Beckens von Gosau. [Foraminifera.] *N. Jb. Min. Geol. Paläont.* 99 1954: 361-378, figs.
- Gansser, A.** Geological and petrographical notes on Gorgona Island in relation to North-western South America. [Foraminifera.] *Schweiz. Min. und Petrol.* 30 1950: 219-237, figs.
- Garnham, P. C. C. (1).** The comparative pathogenicity of protozoa in their vertebrate and invertebrate hosts. In: Mechanisms of microbial pathogenicity, 5th Sympos. Soc. Gen. Microbiol., London 1955: 191-206.
- Garnham, P. C. C. (2).** A haemogregarine infection of *Argas brumpti*. *Trans. R. Soc. trop. Med. Hyg.* 49: 9.
- Garnham, P. C. C. & Bray, R. S.** Absence of cross-immunity between *Plasmodium cynomolgi* and *Plasmodium gonderi*. *Indian J. Malar.* 9: 255-260.
- Garnham, P. C. C., Bray, R. S., Cooper, W., Lainson, R., Awad, F. I. & Williamson, J.** The preerythrocytic stage of *Plasmodium ovale*. *Trans. R. Soc. trop. Med. Hyg.* 49: 158-167, figs.
- Gatenby, J. B., Dalton, A. J., & Felix, M. D.** The contractile vacuole of Parazoa and Protozoa, and the Golgi apparatus. *Nature*, London. 176: 301-302, figs.
- Gauthery, M.** see Dragesco, J.
- Gauthier, H. (1).** Les formations de passage du Crétacé à l'Eocène dans les bassins du Dadés et du Todra (Sud du Haut-Atlas marocain). [Foraminifera.] *C. R. Acad. Sci. Paris* 234 1952: 644-645.
- Gauthier, H. (2).** Observations sur le Crétacé supérieur de la zone des Khelas et de la sous-zone sub-atlasique méridionale (Sud marocain.) [Foraminifera.] *C. R. Acad. Sci. Paris* 234 1952: 859-860.
- Geiger, W.** see Lehmann, F. E.
- Geigy, R. & Herbig, A.** Erreger und Überträger tropischer Krankheiten. Basel. [Incl. protozoa.] *Acta trop.*, Suppl. 6: xxiv+472 pp., figs.
- Geiman, Q. M.** see Becker, C. E.
- Geiman, Q. M.** see Pan, C. T.
- Geissler, H.** Die Erhaltung der Lebensfähigkeit der Toxoplasmen. *Zbl. Bakt. (I. Orig.)* 164: 134-136.
- Geissler, H.** see Behrens, M.
- Gelei, J.** Über die Lebensgemeinschaft einiger temporärer Tümpel auf einer Bergwiese im Börzsnyegebirge (Oberungarn). III. Ciliaten. *Acta Biol. Hung.* 5 1954: 259-343, figs.
- Gellért, J.** [The ciliates of the humus under the lichen *Parmelia saxatilis* Mass.]. *Acta Biol. Acad. Sci. Hung.* 6: 77-111, figs. [English summary.]
- Gentzkow, C. J.** see Simmons, J. S.
- Gerzelli, G.** Ricerche istochimiche ed istomorfologiche sui Trypanosomidi. *Riv. Parassit.* 16: 209-215.
- Gibson, C. L. & Jumper, J. R.** Parasitological and serological studies on the prevalence of canine toxoplasmosis in Memphis, Tennessee. *J. Parasit.* 41 Suppl.: 20-21.

Gibson, F. D. see Bruce-Chwatt, L. J.

Gibson, R. J. see Schoenborn, H. W.

Giovannoni, M. see Nobrega, P.

Giroud, P. see Roger, F.

Giuliani, V. Osservazioni sul *Trypanosoma lewisi* (Kent) dei ratti di Aquila. Nuov. Ann. Igiene Microbiol. 6 : 374-376.

Giunta, M. II.—Diagnosi di forme nuove. [Foraminifera.] Riv. Ital. Paleont. 60 1954 : 33, fig.

Glaessner, M. F. (1). Geology Port Moresby, Papua. [Foraminifera.] Univ. Adelaide, Sir Douglas Mawson Anniv. Vol. 1 1952 : 63-86, figs.

Glaessner, M. F. (2). Taxonomic, stratigraphic and ecologic studies of foraminifera, and their interrelations. Micropaleontology 1 : 3-8.

Gleason, N. N. see Mackie, T. T.

Glintzboeckel, C., & Magné, J. Sur la répartition stratigraphique de *Globigerinelloides algeriana* Cushman et ten Dam, 1948. Micropaleontology 1 : 153-155, figs.

Glockling, B. The metabolism of the malaria parasite. A.T.P. production demonstrated by paper chromatography. Trans. R. Soc. trop. Med. Hyg. 49 : 3.

Glushko, V. V. see Subbotina, N. N.

Goble, F. C. & Krueger, R. F. Observations on experimental trypanosomiasis congolense in the rhesus monkey and the dog. J. Protozool. 2 Suppl.: 1.

Gocht, H. Hystrichosphaerideen und andere Kleinlebewesen aus Oligozän-ablagerungen Nord- und Mitteleu Deutschlands. Geologie, Berlin 1 1952 : 301-321.

Godfrey, D. G. Modification by diet of the course of infections with *Babesia rodhaini* and with trypanosomes in mice. Trans. R. Soc. trop. Med. Hyg. 49 : 303.

Goldman, M. Measuring the brightness of individual amoebae exposed to fluorescein-tagged antibodies. J. Parasit. 41 Suppl.: 13-14.

Goldman, M. & Carver, R. K. Cultivation of *Entamoeba histolytica* from trophozoites in fecal suspensions kept at 25°C. for 4 days. J. Parasit. 41 Suppl.: 13.

Gordon, E. D. see Campbell, R. S. F.

Gordon, H. A. see Phillips, B. P.

Gordon, R. M., Willett, K. C. & Solty, M. A. The deposition of trypanosomes by the tsetse fly. Trans. R. Soc. trop. Med. Hyg. 49 : 5.

Graham, J. J., & Classen, W. J. A Lower eocene foraminiferal faunule from the Woodside Area, San Mateo County, California. Contr. Cush. Fdn. 6 : 1-38, figs.

Grant, P. T. see Fulton, J. D.

Grebecki, A., Kinastowski, W., & Kuznicki, L. [Die sogenannte peripherie Reaktion des *Paramecium caudatum*.] Folia biol., Warsaw 3 : 117-125, figs. [German summary].

Grebecki, A. & Kuznicki, L. (1) The relation of *Paramecium caudatum* to chemical properties of its medium and the protective effect of aggregation against inorganic substances. Folia biol., Warsaw 3 : 127-157.

Grebecki, A. & Kuznicki, L. (2) Investigations on protective reaction of individual and aggregate infusorines in solutions of organic substances. Folia biol., Warsaw 3 : 159-182. [English summary p. 182.]

Greenberg, B. G. see Mackie, J. T.

Greenberg, J., Taylor, D. J. & Bond, H. W. Simple aliphatic substrates in the culture of *Entamoeba histolytica*. Amer. J. trop. Med. Hyg. 4 : 1002-1005.

Greenberg, J. see Nadel, E. M.

Greenberg, J. see Taylor, D. J.

Greenblatt, C. L. see Wolken, J. J.

Greider, M. H., Kostir, W. J. & Frajola, W. J. The structure of *Amoeba proteus* as studied under the electron microscope. *J. Protozool.* **2** Suppl.: 7.

Grekoff, N. see Lys, M.

Grekoff, N. see Cheylan, G.

Grell, K. G. Röntgeninduzierte Chromosomenmutationen bei *Eucoccidium dinophili*. *Arch. Protistenk.* **100**: 323-330, figs.

Grewal, M. S. Some new trypanosomes with development in the "posterior station". *Trans. R. Soc. trop. Med. Hyg.* **49**: 297.

Grill, R. News—Austria. Micro-paleontology **1**: 194-195.

Gromova, E. N. [Dynamics of the nucleic acids in the conjugation of *Paramecium caudatum*.] *C. R. Acad. Sci. URSS.* **58** 1948: 73-75. [In Russian.]

Groot, H. Estudios sobre los trypanosomas humanos (*T. rangeli* y *T. ariarii*). *An. Soc. Biol. Bogota* **6** 1954: 109-126. [English summary.]

Gross, J. A. A comparison of different criteria for determining the effects of antibiotics on *Tetrahymena pyriformis* E. *J. Protozool.* **2**: 42-47.

Gross, J. A. & Jahn, T. L. Microscopic observations on *Euglena* during exposure to antihistamine. *J. Protozool.* **2** Suppl.: 9.

Gross, J. A., Jahn, T. L. & Bernstein, E. The effect of antihistamines on the pigments of green Protista. *J. Protozool.* **2**: 71-75, figs.

Grossowicz, N. & Citri, N. Cultivation of *Leishmania tropica* under defined conditions. *Harefuah, Jerusalem* **49**: 119-121. [Hebrew with English summary.]

Grossowicz, N. see Citri, N.

Groupé, V., Herrmann jr., E. C. & Rauscher, F. J. Ingestion and destruction of influenza virus by free living ciliate *Tetrahymena pyriformis*. *Proc. Soc. exp. Biol. Med.* **88**: 479-482, figs.

Gruchy, D. F. The breeding system and distribution of *Tetrahymena pyriformis*. *J. Protozool.* **2**: 178-185.

Gubler, Y., Cuvillier, J., Bonnard, E. G., Maugis, P., Michel, P., & Perebaskine, V. La géologie de l'Aquitaine et ses possibilités pétrolières. [Foraminifera.] *Proc. Third World Petr. Congr.* **1** 1951: 296-314, fig.

Guha, A. see Ray, H. N.

Gutierrez, J. Experiments with *Trichonympha* from *Zootermopsis angusticollis*. *J. Protozool.* **2** Suppl.: 10-11.

Gutierrez Alfaro, J. J. & Iriarte, D. R. La parasitología en Venezuela desde 1926 hasta 1955. [Incl. protozoa.] *Bol. Lab. Clin. "L. Razetti", Caracas* **16**: 751-771. [In Spanish.]

Hadfield, R. see Singer, I.

Hagn, H. (1). Zur Kenntnis von Helvetikum und Flysch im Raum von Neubeuern am Inn. [Foraminifera.] *Geol. Bayerica, Munich* **14** 1952: 69-75, fig.

Hagn, H. (2). Über einer alluvialen Foraminiferen-Mergel von Neubeuern am Inn. *N. Jb. Min. Geol. Paläont.* **98** 1954: 395-446, fig.

Hagn, H., & Hözl, O. (1). Geologisch-paläontologische Untersuchungen in der subalpinen Molasse des östlichen Oberbayerns zwischen Prien und Sur mit Berücksichtigung des im Süden anschliessenden Helvetikums. [Foraminifera.] *Geol. Bayerica, Munich* **10** 1952: 1-208, figs.

Hagn, H., & Hözl, O. (2). Zur Grenzziehung Katt/Aquitan in der bayerischen Molasse. [Foraminifera.] *N. Jb. Geol. Paläont. B.* **1** 1954: 1-40.

Halff, L. see Adler, S.

Halim, Y. Note sur *Peridinium tregouboffi* n.sp. (Dinoflagellé). *Bull. Inst. océanogr. Monaco* **1056**: 1-7, figs.

Hall, N. C. see Entner, N.

Hall, R. P. Effects of certain antimetabolites on growth of *Chilomonas paramecium*. J. Protozool. **2** Suppl.: 8.

Halldal, T. *see* Braarud, T.

Hallman, F. A., **DeLamater**, J. N. & **Michaelson**, J. B. Esterase activity in *Endamoeba histolytica*. J. Parasit. **41**: 325.

Hallman, F. A., **Michaelson**, J. B., **Blumenthal**, H. & **DeLamater**, J. N. Cytochemical studies on *Endamoeba histolytica*, with particular reference to polysaccharides. Exp. Parasit. **4**: 45-53.

Hames, C. G. *see* Routh, C. F.

Hammond, D. M. *see* Fitzgerald, P. R.

Hamon, M. Un nouveau cilié hétérotrophe, ectoparasite des larves pélagiques de *Luidia*. Arch. Zool. exp. gén. **91** Notes et Rev. 1953: 145-156, figs.

Hampl, A. *Trichodina unionis* n.sp., ein neues Ciliat aus Süßwassermuscheln und einige Angebote über andere in oder an Mollusken lebende Ciliaten. Zool. Anz. **155**: 43-49, figs.

Hanson, R. W., **Schwartz**, H. S. & **Barker**, S. B. Application of the anthrone reaction to the study of carbohydrate metabolism in *Tetrahymena pyriformis*. J. Protozool. **2** Suppl.: 5.

Hanzawa, S. (1). Notes on the recent and fossil *Baculogypsinoides spinosus* Yabe & Hanzawa from the Ryukyu Islands and Taiwan (Formosa), with remarks on some spinose foraminifera. Short Pap. Inst. Geol. Tôhoku Univ. **4** 1952: 1-22, figs.

Hanzawa, S. (2). Memorial to Thomas Wayland Vaughan. Trans. & Pr. Palaeont. Soc. Jap. **6** 1952: 184.

Hara, K., **Takagi**, K., **Oka**, S., **Nasagawa**, Y. & **Sawada**, T. Studies on the toxic effect of *Entamoeba histolytica* on the parenchymal organs of mice. Gunma J. med. Sci. **4**: 201-212, figs.

Harboe, A. & **Erichsen**, S. A comparative study of the length of the parasites of 4 strains of *Toxoplasma gondii*. Acta Path. Microb. Scand. **37**: 31-41.

Harinasuta, C. & **Harinasuta**, T. Studies on the growth *in vitro* of strains of *Entamoeba histolytica*. Ann. trop. Med. Parasit. **49**: 331-350.

Harinasuta, T. *see* Harinasuta, C.

Harrington, G. L. (1). Bathymetric position of some Californian Pliocene foraminifera. Contr. Cush. Fdn. **6**: 125-127.

Harrington, G. L. (2). A Recent foraminiferal faunule from the Bay of Fundy. Contr. Cush. Fdn. **6**: 131-132.

Harrison, A. D. Four new species of gregarines from mountain cockroaches of the Cape Peninsula. Ann. S. Afr. Mus. **41**: 387-403, figs.

Harrison, D. M. *see* Finley, H. E.

Hartmann, L. *see* Schneider, J.

Hartmann, M. (1). Mein Verhältnis zu F. Schaudinn und seinem Werk. Zbl. Bakt. (I. Orig.) **164**: 13-14, portrait.

Hartmann, M. (2). Sex problems in Algae, Fungi and Protozoa. Amer. Nat. **89**: 321-346, figs.

Hartmann, M. (3). Sexualitätsprobleme bei Algen, Pilzen, und Protozoen. Biol. Zbl. **74**: 311-334, figs.

Hashimoto, K. On the reorganisation of the cytoplasmic structures at the fission stage of the Peritrichous Ciliate *Vorticella striata*. Zool. Mag., Tokyo **64**: 344-350, fig. [Japanese with English summary.]

Havlik, O., **Hübner**, J. & **Zastěra**, M. The influence of cortisone in experimental toxoplasmosis in the white mouse. Čsl. Parasit. **2**: 75-81. [English summary.]

Hawes, R. S. J. A *limax*-amoeba from the rectum of the grass-snake, *Natrix natrix*, as a facultative aerobe *in vitro*. Nature, Lond. **175**: 779-780.

Hawkes, H. A. *see* Baines, S.

Hawking, F. The pathogenicity of protozoal and other parasites: general considerations. In: Mechanisms of microbial pathogenicity, 5th Sympos. Soc. Gen. Microbiol., London 1955: 176-190.

Hawking, F. & Thurston, J. P. The action of antrycide upon trypanosomes *in vitro*. Brit. J. Pharmac. Chemother. 10: 454-455.

Hayasaka, J., & Matsuo, H. Permian fossils at Nojiri, Kamiana-mura, Fukui Prefecture. [Foraminifera.] J. geol. Soc. Japan 57 1951: 266. [In Japanese.]

Hayes, C. *Amoeba taylorae* n.sp. Quart. J. micr. Sci. 96: 375-381, figs.

Hayes, R. E. see Elliott, A. M.

Haynes, J. Pelagic foraminifera of the Thanet beds, and the use of Thanetian as a stage name. Micropaleontology 1: 189.

Hedrick, R. M. A trypanosome from the big brown bat, *Eptesicus fuscus fuscus* (Beauvois) in Minnesota. J. Parasit. 41: 629-634, fig.

Heezen, B. C. see Ericson, D. B.

Heisch, R. B. The vector of an outbreak of Kala-azar in Kenya. Nature, Lond. 175: 433.

Heldt, J. H. (1). Eaux rouges. Bull. Soc. Sci. nat. Tunis 5 1952: 103-106.

Heldt, J. H. (2). La grégarine de la crevette caramote (*Penaeus kerathurus* Forskal). Bull. Soc. Sci. nat. Tunis 6 1954: 103-112, figs.

Henbest, L. G. Joseph Augustine Cushman and the contemporary epoch in micropaleontology. Proc. geol. Soc. Amer., Ann. Rept. for 1951, 1952: 95-102.

Hendricks, J. W. see Rigdon, R. H.

Henigst, W. Aussergewöhnliches Verhalten eines *Trypanosoma gambiense*-Stammes in der weissen Maus. Z. Tropenmed. Parasit. 6: 361-368. [English summary.]

Henry, S. M., Christy, V. L. & Lilly, D. M. The role of bacteria in the nutrition of *Euplates patella*. J. Protozool. 2 Suppl.: 3.

Henson, F. R. S. Observations on the geology and petroleum occurrences of the Middle East. [Foraminifera.] Proc. Third World Petr. Cong. 1 1951: 118-140, figs.

Herbig, A. see Geigy, R.

Herbig-Sandreuter, A. Experimentelle Untersuchungen über den Cyclus von *Trypanosoma rangeli* Tejera 1920 in Warmblüter und in *Rhodnius prolixus*. Acta trop. 12: 261-264, figs.

Herman, C. M. Diseases of birds. [Incl. protozoal infections.] Chapter 13 in Recent studies in avian biology. Urbana, 1955: 450-467.

Herman, C. M. & Clark, G. M. Further observations on occurrence of *Hepatozoon* in gray squirrels (*Sciurus carolinensis*). J. Parasit. 41 Suppl.: 17.

Herman, C. M. & Price, D. L. The occurrence of *Hepatozoon* in the gray squirrel (*Sciurus carolinensis*). J. Protozool. 2: 48-51, figs.

Herrick, C. A. see Cmejla, H. E.

Herrick, C. A. see Levine, L.

Herrick, C. A. see Schildt, C. S.

Herrick, S. M. see Cole, W. S.

Herrmann jr., E. C. see Groupé, V.

Hewitt, C. H. see Baines, S.

Higuchi, Y. Fossil foraminifera from the Miyate formation, Miura Peninsula. J. geol. Soc. Japan 60 1954: 138-141, figs.

Hill, C. S. see Albritton, C. C. jr.

Hilly, J., & Sigal, J. L'âge de la transgression crétacé dans le massif de l'Edough (Nord-Constantinois, Algérie). [Foraminifera.] C. R. Acad. Sci., Paris 234 1952: 1701-1703.

Hiltermann, H. (1). Stratigraphische Fragen der Oberkreide, unter besonderer Berücksichtigung der Mikropaleontologie. [Foraminifera.] Zeit. deut. Geol. Gesell. **104** 1952: 172.

Hiltermann, H. (2). News—Germany. Micropalaontology **1**: 195-198.

Hirshfield, H. I. see Pecora, P.

Hitchcock, D. J. The life cycle of *Isospora felis* in the kitten. J. Parasit. **41**: 383-397, figs.

Hnizdie, J. see Jira, J.

Hoare, C. A. (1). Life cycle of *Hexamita meleagridis*. Vet. Rec. **67**: 324.

Hoare, C. A. (2). Discussion on recent investigations on trypanosomiasis in British West Africa. Trans. R. Soc. trop. Med. Hyg. **49**: 225-226.

Hoare, C. A. (3). Prof. V. A. Dogiel. Nature, Lond. **176**: 627.

Hoare, C. A. (4). The epidemiological role of animal reservoirs in human leishmaniasis and trypanosomiasis. Vet. Rev. Annot. **1**: 62-68, figs.

Hoare, C. A. (5). Intraspecific biological groups in pathogenic protozoa. Refuah Veterinarith, Tel-Aviv **12**: 263-258. [In Hebrew and English.]

Hoare, C. A. & Neal, R. A. Host-parasite relations and pathogenesis in infections with *Entamoeba histolytica*. In: Mechanisms of microbial pathogenicity, 5th Sympos. Soc. Gen. Microbiol., London 1955: 230-241.

Hölzl, O. see Hagn, H.

Hofker, J. (1). Über die Familie Epistomariidae. (Foram.). Palaeontographica A **105** 1954: 166-206, figs.

Hofker, J. (2). Datering van fossielen door middel van foraminifera I. & II. Natuurh. Maandbl. **44** 5-6, 9-10, **54**, 91-92.

Hofker, J. (3). Foraminifera of Southern Limburg, Netherlands, I-XIII. Natuurh. Maandbl. **44**: 4-5, 25-27, 49-53, 68-73, 99-106, 115-125, figs.

Hofker, J. (4). *Discopulvinulina cushmani* Hofker, a new name for *Hanzawaia concentrica* (Cushman). Contr. Cush. Fdn. **6**: 128-130, fig.

Hollande, A., & Enjumet, M. (1) Sur l'évolution et la systématique des Labyrinthulidae. Etude de *Labyrinthula algeriensis* nov.sp. Ann. Sci. nat. Zool. **17**: 357-368, figs.

Hollande, A., & Enjumet, M. (2) Parasites et cycle évolutif des Radiolaires et des Acanthaires. Bull. Sta. Aquic. Pêche Castiglione (N.S.) **7**: 151-176, figs.

Holling, J. & Fowle, C. D. *Isospora buteonis* Henry in the goshawk (*Accipiter gentilis*). J. Parasit. **41**: 638-639.

Holt, C. J. see Rendtorff, R. C.

Holz, G. G. & Thompson, J. C. The axenie cultivation of *Tetrahymena (Paraglaucoma) rostrata* (Kahl) Corliss. J. Protozool. **2** Suppl.: 13-14.

Holz, J. Die Vermehrung von *Toxoplasma gondii*. Z. Hyg. InfektKr. **140** 1954: 134-137, figs.

Holz, J. & Bringmann, G. (1) Vergleichende elektronenmikroskopische Untersuchungen an Toxoplasmen und Sarcosporidien. Z. Hyg. InfektKr. **139** 1954: 239-242, figs.

Holz, J. & Bringmann, G. (2) Elektronenmikroskopische Befunde zur Aureomycin-Therapie der Toxoplasmose. Z. Hyg. InfektKr. **139** 1954: 393-398, figs.

Holz, J. see Schmidt-Hoensdorf, F.

Honest, R. F. (1). A new flagellate, *Tritrichomonas simoni* from the sage grouse, *Centrocercus urophasianus*. Bull. Wyoming Game Fish Comm. No. 8: 1-3, fig.

Honest, R. F. (2). The *Eimeria* of elk, *Cervus canadensis nelsoni* with a description of a new species. Bull. Wyoming Game Fish Comm. No. 8: 25-28, fig.

Honess, R. F. & Post, G. *Eimeria* of grouse (Family: Tetraonidae), with a description of *Eimeria pattersoni* n.sp. from the sage grouse. Bull. Wyoming Game Fish Comm. No. 8: 5-11, figs.

Honess, R. F. see Landram, J. F.

Honigberg, B. M. (1). Structure and morphogenesis of two new species of *Hexamastix* from lizards. J. Parasit. 41: 1-17 figs.

Honigberg, B. M. (2). Distribution of phosphatase in *Paramecium caudatum*. J. Protozool. 2 Suppl.: 4.

Honigberg, B. M. & Davenport, H. A. Staining flagellate protozoa by various silver-protein compounds. Stain Technol. 29 1954: 241-246, figs.

Hopkins, S. H. see Menzel, R. W.

Horibata, T. see Yamazi, I.

Hornibrook, N. de B. (1). Fusulines of the Waipapa Series, North Auckland Peninsula. 19th int. géol. Congr. Alger Sympos. Séries de Gondwana 1952: 25.

Hornibrook, N. de B. (2). News—New Zealand. Micropaleontology 1: 107.

Houlahan, D. A. see Levine, N. D.

Hovasse, R. Les organites auto-reproducteurs des infusoires et des Périadiens, et la notion de plasmagène. C. R. Ass. franç. Av. Sci. 70 1951: 46-49, fig.

Howard, J. L. see Levine, M.

Huber-Pestalozzi, G. (1). Das Phytoplankton des Süßwassers. Systematik und Biologie. Teil 4. Binnengewässer 16: 1-606, figs.

Huber-Pestalozzi, G. (2). Dr. Eugène Penard. Schweiz. Z. Hydrol. 17: 160-169, figs.

Huckriede, R. Über umgelagerte marine Kreide in Hessen. [Foraminifera.] N. Jb. Geol. Paläont. B. 8 1954: 351-361.

Hübner, J. see Havlik, O.

Huff, C. G. & Marchbank, D. F. Changes in infectiousness of malarial gametocytes. I. Patterns of oocyst production in seven host-parasite combinations. Exper. Parasit. 4: 256-270, figs.

Hughes, F. W. & Tatum, A. L. The effects of hypoxia on infections with *Plasmodium cathemerium*. J. inf. Dis. 97: 231-237, figs.

Hukui, T. On two types of *Stenophora nematooides* Léger and Duboscq, 1903. J. Sci. Hiroshima Univ. Zool. 13 1952: 91-95, figs.

Hull, R. W. Feeding responses of *Podophrya collini*. J. Protozool. 2 Suppl.: 3.

Hull, R. W. & Camin, J. H. The occurrence of blood parasites in captive reptiles. [Haemogregarines.] J. Protozool. 2 Suppl.: 3.

Hunt, B. *Volvox*, a living micro-colonial organism. Proc. Pa. Acad. Sci. 29: 282.

Hunter, N. W. Some aspects of the morphology of *Opalina carolinensis* Metcalf. Trans. Amer. micr. Soc. 74: 315-324, figs.

Hutner, R. A. see Baker, H.

Hutner, S. H., & Lwoff, A. Biochemistry and physiology of Protozoa. Vol. 2. New York. (Academic Press Inc.) 1955. pp. xiii+388, figs.

Hutner, S. H. see Baker, H.

Hutner, S. H. see Nathan, H. A.

Ides, D. see Seneca, H.

Ikeda, A. (1). Studies on *Euplates woodruffi* Gaw in Japan. I Division and conjugation. Zool Mag., Tokyo 64: 321-325, figs. [Japanese with English summary].

Ikeda, A. (2). Studies on *Euplates woodruffi* Gaw in Japan. II Hemixis. Zool. Mag., Tokyo 64: 326-329, figs. [Japanese with English summary.]

Ikeda, M. Factors necessary for *E. tenella* infection of the chicken. I. The influence of the digestive juice on infection. Jap. J. vet. Sci., Suppl. 15 1954: 42-43. [Abstract in Rec. Res. Fac. Agric. Univ. Tokyo, No. 4 1955: 98].

Ion, D. C., Elder, S., & Pedder, A. E. The Agha Jari Oilfield, South-West Persia. [Foraminifera.] Proc. Third World Pet. Congr. 1 1951 : 162-186.

Ionescu, M. A. & Murgoci, A. Cercetări asupra faunei intestinale la *Reticulotermes lucifugus* Rossi, în R.P.R. (II). Bul. sti. Acad. Repub. Rom., Ser. Geol. etc., 2 1950 : 35-50 figs. [Rumanian with French summary].

Iriarte, D. R. see Gutierrez Alfaro, J. J.

Ivens, V. see Levine, N. D.

Iwahori, S. see Watanabe, K.

Iwanczuk, I. & Stobnicka, I. Investigations of the invasion with intestinal parasites of children in infant and primary schools of Warsaw. [*Giardia*.] Acta parasit. Polon. 3 : 77-98. [Polish with English summary.]

Jackson, C. H. N. The natural reservoir of *Trypanosoma rhodesiense*. Trans. R. Soc. trop. Med. Hyg., 49 : 582-587.

Jackson, G. J. The effect of cortisone on *Plasmodium berghei* infections in the white rat. J. inf. Dis. 97 : 152-159 figs.

Jacobs, L. & Melton, M. L. Immunity in murine toxoplasmosis. J. Parasit. 41 Suppl. : 20.

Jacobs, L., Melton, M. L., & Cook, M. K. Observations on toxoplasmosis in dogs. J. Parasit. 41 : 353-361.

Jacobs, L. see Melton, M. L.

Jahn, B. Electronenmikroskopische Untersuchungen an Foraminiferenschalen. Zeits. Wiss. Mikroskopie u. mikro. Technik, Stuttgart. 61 1953 : 294-297, figs.

Jahn, T. L. Adventures among the flagellates, and other matters. J. Protozool. 2 : 1-5.

Jahn, T. L. see Bernstein, E.

Jahn, T. L. see Gross, J. A.

Jahn, T. L. see Wirtschafter, S. K.

Jakowska, S., & Nigrelli, R. F. A taxonomic re-evaluation of *Dactylosoma* Labbé, 1894, a Babesioid of cold-blooded vertebrates, J. Protozool. 2 Suppl. : 8.

Jakowska, S. see Nigrelli, R. F.

Jane, F. W. Famous plant-animal *Euglena*. New Biol. 19 : 114-125, figs.

Janiszewska, J. (1). Actinomyxidia : morphology, ecology, history of investigations, systematics, development. Acta parasit. Polon. 2 : 406-443 figs.

Janiszewska, J. (2). *Siedleckiella antonii* sp.n. : Remarks on the sporogenesis in the genus *Siedleckiella* and in other Actinomyxidia. Zool. Polon. 6 : 88-100, figs.

Jaroslav, B. N. The effects of X irradiation on immunity of the mouse to *Trypanosoma duttoni*. J. inf. Dis. 96 : 242-249 figs.

Jaskoski, B. J. A parasitological study on Navy recruits. [Intestinal protozoa.] Amer. Midl. Nat. 52 : 442-445.

Jaswant Singh. Some problems on chemotherapy of malaria. Indian J. Malar. 9 : 271-275.

Jaswant Singh, & Mohan, B. N. Susceptibility of *Culex (Culex) bitaeniorrhynchus* Giles, 1901, to *Plasmodium relictum* but not to *Plasmodium gallinaceum* and *Plasmodium falciparum*. Indian J. Malar. 9 : 71-74.

Jay, G. E. see Nadel, E. M.

Jeffery, G. M., & Eyles, D. E. Infectivity to mosquitoes of *Plasmodium falciparum* as related to gamete density and duration of infection. Amer. J. trop. Med. Hyg. 4 : 781-789 figs.

Jeffery, G. M., & Rendtorff, R. C. Preservation of viable human malaria sporozoites by low-temperature freezing. Exper. Parasit. 4 : 445-454.

Jeffery, G. M., Wilcox, A., & Young, M. D. A comparison of West African and West Pacific strains of *Plasmodium ovale*. Trans. R. Soc. Trop. Med. Hyg. 49 : 168-175.

Jeffery, G. M. see Young, M. D.

Jenkins, S. H. see Baines, S.

Jettmar, H. M. Über Schädigungen der Toxoplasmen durch verschiedene Körperflüssigkeiten des Menschen und der Tiere. Arch. Hyg., Berlin. **139**: 33-41. [English summary.]

Jewett, J. M. see O'Connor, H. G.

Jira, J., & Hnizdie, J. Contribution to the study of *Trichomonas urethritis* in males. Čsl. Parasit. **1** 1954: 97-114. [Czech with English summary.]

Jirovec, O. (1). Co dala naše parazitologie praxi. [Incl. protozoa.] Čsl. Parasit. **1** 1954: 5-12 [In Czech.]

Jirovec, O. (2). [New facts relating to pneumocystosis of infants.] Českoslov. Hyg. Epidemiol. Mikrobiol. Iimunol. **4**: 389-401 figs. [English summary.]

Jirovec, O. (3). Parasiten unserer Daphnien. [Sporozoa.] Čsl. Parasit. **2** 95-98 figs. [German summary.]

Jørgensen, C. B. Quantitative aspects of filter feeding in invertebrates. Biol. Rev. **30**: 391-454.

Johnson, A. E. see Fitzgerald, P. R.

Johnson, J. H. An introduction to the study of organic limestones. [Foraminifora.] Quart. J. Colorado Sch. Mines. **46** 1951: 1-185.

Jones, M. M. see Nelson, E. C.

Jopling, W. H. Long incubation period in Kala-azar. Brit. med. J. **2**: 1013.

Joyner, L. P. see Davies, S. F. M.

Jujimoto, H. see Arai, J.

Jumper, J. R. see Gibson, C. L.

Jux, U. Zur Geologie des Kreidegebietes von Abu Roasch bei Kairo. [Foraminifera.] N. Jb. Min. Geol. Paläont. **100** 1954: 159-207, figs.

Kaasschieter, J. P. A. see Drooger C. W.

Kaechlin, E. Die Kleinfossilien des Jura. [Foraminifera.] Mikrokosmos **45**: 13-16, figs.

Kahler, F. Über die Bruchfestigkeit einiger Typen von Fusulinenschalen. Oesterreich. Akad. Wiss., Math. Naturwiss. Kl. **160** 1952: 377-386.

Kahn, J. see Reich, K.

Kamptner, E. Fossile Coccolithineen—Skelettreste aus Insulinde. Eine Mikropaläontologische Untersuchung. Verh. Akad. Wet. Amst., Afd. Naturwrk. (2) **50**: 1-105, figs.

Kamptner, E. see Braarud, T.

Kaneda, M. On the elimination of nuclear materials from the macro-nucleus during binary fission in *Chlamydomon*. Zool. Mag., Tokyo **64**: 1-6. [English summary.]

Kanmera, K. (1). The Upper Carboniferous and the Lower Permian of the Hikawa valley, Kumamoto Prefecture, Kyushu, Japan. [Foraminifera.] J. geol. Soc. Japan **58** 1952: 17-32, figs. [English summary, p.32.]

Kanmera, K. (2). Stratigraphy of the Palaeozoic system in the southern part of Kyushu. [Foraminifera.] J. geol. Soc. Japan **58** 1952: 319-320.

Kanmera, K. (3). The lower Carboniferous Kakisako formation of southern Kyushu, with a description of some corals and fusulinids. Mem. Fac. Sci. Kyushu Univ., Geol. **D3** 1952: 157-177, figs.

Kantorová, V. O dvojakom veku puchovskych slienov. [Foraminifera.] Geol. Sborn. Slovensk. Akad. **4** 1953: 413-430, figs. [German & Russian summaries.]

Kanuma, S. Stratigraphy of Yokokura-yama, Kochi Prefecture. [Foraminifera.] J. geol. Soc. Japan **58** 1952: 321-322. [Abstract in Japanese.]

Kapustin, V. F. [Atlas of blood parasites of animals and of Ixodid ticks.] [Incl. Protozoa.] 2nd ed. Moscow 1955: 216 pp., figs. [In Russian.]

Karandikar, K. R. & Vittal, M. Flagellates in the termites from Dharwar. J. Univ. Bombay (N.S.) **23B** (Biol. Sci. No. 36)(3): 1-24 figs.

Kåss, E. The viability of *Toxoplasma* in mouse carcass. Acta Path. Microb. Scand. **37**: 84-88

Kasimova, N. M. see Khain, V. E.

Kaunat, H. Die Wirkung von Antibiotika auf *Paramecium caudatum*. Protoplasma **45**: 1-36, figs.

Kawada, S., & Fujimoto, H. Oomi limestone of Niigata prefecture: stratigraphical study of the Fusulinidae. *J. geol. Soc. Japan* **58** 1952 : 320. [in Japanese.]

Kawada, S. see Arai, J.

Kawada, S. see Fujimoto, H.

Kean, B. H., & Weld, J. T. Transmission of *Trichomonas vaginalis* in the eye of animals. *Proc. Soc. exp. Biol. Med.* **89** : 218-219.

Keidal, H. J. W. see Kraneveld, F. C.

Kelley, jr., G. W. Intestinal parasitism in an irrigated community of Western Nebraska. *Amer. J. trop. Med. Hyg.* **4** : 901-907.

Keng, W. P. see Yen, T. P.

Kent, P. E., Slinger, F. C., & Thomas, A. N. Stratigraphical exploration survey in South-West Persia. [Foraminifera.] *Proc. Third World Pet. Cong.* **1** 1951 : 141-161.

Kent, P. E. see Eames, F. E.

Kerner, M. W., & Anderson, H. H. The uptake of yttrium and cerium by viable *Entamoeba histolytica* in culture. *Exp. Parasit.* **4** : 564-568 figs.

Kerner, M. W. see Loran, M. R.

Kevan, D. K. McE. A practical key to the orders and suborders of soil and litter animals. In "Soil Zoology" Kevan London, 1955 : 452-488, figs.

Key, A. J. see Drooger, C. W.

Keyzer, F. G. *Lamarckinita*, new name replacing *Ruttenella* Keyser 1953 (*non Ruttenella* van den Bold, 1946.) *Contr. Cush. Fdn.* **6** : 119.

Khabir, P. A., & Manwell, R. D. (1). Glucose consumption of *Plasmodium hexamerium*. *J. Parasit.* **41** : 595-603.

Khabir, P., & Manwell, R. D. (2). The glucose consumption of *Plasmodium hexamerium*. *J. Protozool.* **2 Suppl.** : 1

Khain, V. E., Shardanov, A. N., & Kasimova, N. M. [On the stratigraphy of the Middle Jurassic of the South-eastern Caucasus]. [Foraminifera.] *C. R. Acad. Sci. U.R.S.S.* **100** : 965-968. [In Russian.]

Khalaf, G. I. see Blagg, W.

Kheissin, E. M. [Development of two intestinal coccidia of the rabbit: *Eimeria piriformis* Kotlan & Pospesch and *Eimeria intestinalis* nom. nov.] *Sci. Notes Karelo-Finn. University, Biol. Sci.* **3(3)** 1948 : 179-187 figs. [In Russian.]

Khloponin, K. L. see Nemkov G. I.

Kicinski, F. M. Contributo alla stratigrafia nel territorio di Orte (Lazio-Umbria.) [Foraminifera.] *La Ricerca Scient. Roma* **22** 1952 : 24-42, figs.

Kim, O. J. see Elliott, R. H. J.

Kimball, R. F. The role of oxygen and peroxide in the production of radiation damage in *Paramecium*. *Ann. N.Y. Acad. Sci.* **59** : 638-648, figs.

Kimball, R. F., & Gaither, N. (1). Effect of incomplete chromosome sets on behaviour of nuclei at conjugation in *Paramecium aurelia*. *Genetics* **40** : 579.

Kimball, R. F., & Gaither, N. (2). Behaviour of nuclei at conjugation in *Paramecium aurelia*. I. Effect of incomplete chromosome sets and competition between complete and incomplete nuclei. *Genetics* **40** : 878-889.

Kimball, R. F., & Gaither, N. (3). Lack of an effect of a high dose of X-rays on aging in *Paramecium aurelia*, variety 1. *Genetics* **39** : 977.

Kinastowski, W. see Grebecki, A.

Kirchner, Z. Z zagadnien biostratygrafii miocenu. [Foraminifera.] *Przeglad Geol.* **6** 1953 : 1-8 (249-256).

Kireeva, G. D., & Nesterenko, L. P. [The Schwagerina Horizon of the Donetz Basin.] *Bull. Soc. Nat. Moscow, Geol.* **30** : 71-73. [in Russian.]

Kirk, R., & Lewis, D. J. Studies in leishmaniasis in the Anglo-Egyptian Sudan, XI. *Phlebotomus* in relation to leishmaniasis in the Sudan. Trans. R. Soc. trop. Med. Hyg. 49 : 229-240.

Kirner, S. H., Barbehenn, K. R., & Travis, B. V. A summer survey of the blood parasites of two *Microtus pennsylvanicus* populations, Ithaca, N.Y. J. Parasit. 41 Suppl. : 14.

Kitching, J. A. Survey of effects of high hydrostatic pressures on protozoa. J. Protozool. 2 Suppl. : 11.

Klasz, I. de (1). Einige neue oder wenig bekannte Foraminiferen aus der helvetischen Oberkreide der bayerischen Alpen südlich Traumstein (Oberbayern.) Geol. Bavaria, Munich 17 1953 : 223-244, figs.

Klasz, I. de (2). On the foraminiferal genus *Gublerina* Kikoine. Geol. Bavaria 17 1953 : 245-251, fig.

Klasz, I. de (3). A new *Globotruncana* from the Bavarian Alps and North Africa. Cont. Cush. Fdn. 6 : 43-44, fig.

Klink, G. E., & Burrows, R. B. Ingestion of *Trichuris trichiura* ova by *Balantidium coli*. J. Parasit. 41 : 634.

Klink, G. E. see Burrows, R. B.

Kloetzel, J. see Nussenzweig, V.

Klumpp, B. Beitrag zur Kenntnis der Mikrofossilien des Mittleren und Oberen Eozän. Palaeontographica A 103 1953 : 377-406, figs.

Kluttz, J. A. see Mackie, T. T.

Knierim, F. see Pizzi, T.

Kniker, H. T. see Todd, R.

Knipscheer, H. C. G. see Ganss, O.

Kochansky-Devidé, V. [Permitische Foraminiferen und kalkalgen aus der Umgebung von Bar in Montenegro.] Geol. Vjesn. 5-7 1954 : 295-298, figs. [German summary, p.298].

Kochansky-Devidé, V., & Ramovš, A. *Palaeofusulina nana* Licharew aus den Bellerophonschichten von Volaka und ein Vergleich mit den Mikrofossilien anderer Fundorte Sloweniens. Razpr. Akad. Ljubljani Cl. IV. 2 1954 : 329-340, figs. [German summary.]

Köwing, K. Über das Alttertiär von Scheesel und Wittlöhe. [Foraminifera.] Abh. naturw. Ver. Bremen 34 : 27-32.

Kohn, J. Gelatin liquefaction by *Entamoeba histolytica*. Trans. R. Soc. trop. Med. Hyg. 49 : 304.

Koizumi, S. (1). Preliminary studies of antigenic differences among stocks of *Paramecium caudatum*. Sci. Rep. Tōhoku Univ. (4) 21 : 24-26.

Koizumi, S. (2). Antiserum-insensitive individuals spontaneously occurring in *Paramecium caudatum*, Stock Ka 6. Sci. Rep. Tōhoku Univ. (4) 21 : 27-30.

Koizumi, S. (3). Antigenic differences between sensitives resistants of *Paramecium caudatum*, Stock Ka 6. Sci. Rep. Tōhoku Univ. (4) 21 : 31-32.

Koizumi, S. (4). Modification of antigenic characters in *Paramecium caudatum*, Stock Ka 6. Sci. Rep. Tōhoku Univ. (4) 21 : 33-35.

Koizumi, S. (5). Fluctuation of sensitivity to antiserum in *Paramecium caudatum*, Stock Ka 6. Sci. Rep. Tōhoku Univ. (4) 21 : 36-39, figs.

Koizuma, S. see Kubota, S.

Kolderie, M. Q. see Bonner, J. T.

Konishi, K. (1). Occurrence of *Gymnocodium*, a Permian alga, in Japan. [Foraminifera.] Trans. Proc. Palaeont. Soc. Japan 7 1952 : 215-221.

Konishi, K. (2). New *Boultonia* and other microfossils from north Thailand (Siam). Trans. Proc. Palaeont. Soc. Japan. 12 1953 : 103-110, figs.

Kostir, W. J. see Greider, M. H.

Kozar, Z. [Review of Polish researches on toxoplasmosis.] Zool. Ź., Moscow. 34 : 1000-1007. [In Russian]

Kozloff, E. N. *Lwoffia cilifera* gen. nov., sp. nov., a ciliated member of the family Sphenophryidae (Holotrichia : Thigmotrichia). Biol. Bull. Wood's Hole. 108 : 283-289, figs.

Kraneveld, F. C., & Keidel, H. J. W. Bloedparasieten bij vissen in Nederland. I. Trypanosomen bij de paling, *Anguilla vulgaris*. Tijdschr. Diergeneesk. 80 : 256-260 figs. [English summary.]

Kraneveld, F. C., & Mansjoer, M. Examination on blood-parasite: a *Trypanosoma* of turtle dove (*Streptopelia chinensis tigrina*). *Hemera Zoa* **61** 1954: 9-20 figs.

Krascheninnikow, S. Observations on the morphology and division of *Eudiplodinium neglectum* Dogiel (Ciliata. Entodiniomorpha) from the stomach of a moose (*Alces americana*). *J. Protozool.* **2**: 124-134 figs.

Krause, A. C. *Toxoplasma* in tissues of man and pets. *J. Parasit.* **41**: 545-548.

Kremp, G. Sporen-Vergesellschaftung und Mikrofaunen-Horizonte im Ruhrkarbon. 3rd. Congr. Strat. et Geol. Carbonifère, Heerlen (1951) 1952: 216-220.

Krueger, R. F. see Goble, F. C.

Kruidenier, F. J. see Levine, N. D.

Kubiak, G. V. L., & Molfi, A. Ocorência do "Mal de Cadeiras" no Paraná (Brasil). *Arq. Biol. Curitiba.* **8** 1953: 7-23 figs. [English summary]

Kubota, S. see Tomita, G.

Kudo, R. R. Protozoology. 4th ed. Springfield, Ill. 1954: 966 pp., figs.

Küpper, K. (1). Upper Cretaceous foraminifera from the "Franciscan Series," New Almaden District, California. *Contr. Cush. Fdn.* **6**: 112-118, figs.

Küpper, K. (2). Eocene larger foraminifera near Guadalupe, Santa Clara County, California. *Contr. Cush. Fdn.* **6**: 133-139, figs.

Kufferath, H. see Conrad, W.

Kulp, J. L., & Carr, D. R. Surface area of deep sea sediments. [Protozoa.] *J. Geology* **60** 1952: 148-159, figs.

Kun, E., Bradin, jr., J. L., & Decharry, J. M. Effect of metabolic inhibitors on production of CO_2 and H_2S by *Endamoeba histolytica*. *Proc. Soc. exp. Biol. Med.* **89**: 604-607.

Kundert, C. J. Geology of the Whittier-La Habra area, Los Angeles County, California. [Foraminifera.] *Calif. Dept. Nat. Res. Div. Mines Spec. Rept.* **18** 1952: 1-22, figs.

Kuntz, R. E., Lawless, D. K., & Mansour, N. S. A cursory survey of the intestinal parasites of natives living in southwest Sudan. *Amer. J. trop. Med. Hyg.* **4**: 895-900.

Kurosawa, A. see Tomita, G.

Kuznetsov, S. S., & Miklukho-Maklai, A. D. [On the presence of the Devonian in the Southern Slopes of the main Caucasian Ridge] [Foraminifera.] *C. R. Acad. Sci. U.R.S.S.* **104**: 890-891. [In Russian.]

Kuźnicki, L. see Grebecki, A.

Laan, P. A. van der. Some additional notes about the nematode-catching amoeboid organism, *Theratromyxa weberi* Zwillemberg. *Tijdschr. Plantenziekten* **60** 1954: 139-145, figs. [Dutch with English summary.]

Ladd, H. S., Tracey, J. I., Lill, G., Wells, J. W., & Cole, W. S. Drilling on Bikini Atoll, Marshall Islands. [Foraminifera.] *Proc. 18th. Int. geol. Congr. Gt. Britain.* G. [1948] **8** 1950: 38-43.

Laffitte, R., & Magné, J. Présence dans le Dahra (Algérie occidentale) d'une série de passage du Crétacé à l'Eocène. [Foraminifera.] *C. R. Acad. Sci., Paris* **240**: 1352-1354.

Lafon, M., Durchon, M., & Saudray, Y. Recherches sur les cycles saisonniers du plankton. *Ann. Inst. océanogr. Paris N.S.* **31**: 155-230, figs.

Lainson, R. (1). Toxoplasmosis in England. I. The rabbit (*Oryctolagus cuniculus*) as a host of *Toxoplasma gondii*. *Ann. trop. Med. Parasit.* **49**: 384-396, figs.

Lainson, R. (2). Toxoplasmosis in England. II. Variation factors in the pathogenesis of *Toxoplasma* infections; the sudden increase in virulence of a strain after passage in multimammate rats and canaries. *Ann. trop. Med. Parasit.* **49**: 397-416, figs.

Lainson, R. (3). Isolation of *Toxoplasma gondii* from domestic rabbits in England. *Trans. R. Soc. trop. Med. Hyg.* **49**: 10-11.

Lainson, R. (4). Development and persistence of "pseudocysts" of *Toxoplasma gondii* (rabbit strain) in the lungs of experimentally infected animals. *Trans. R. Soc. trop. Med. Hyg.* **49**: 296-297.

- Lainson, R.** see Garnham, P. C. C.
- Lakonen, M.** see Singer, I.
- Lamborn, W. A.** The haemophagous fly as a possible vector of *Leishmania*. Bull. endem. Dis., Baghdad 1 : 239-249.
- Lamy, L.** see Le Gac, P.
- Landers, E. J.** *Eimeria punctata* n. nov. for *Eimeria honessi* Landers, 1952, preoccupied. J. Parasit. 41 : 115.
- Landram, J. F., & Honess, R. F.** Some internal parasites of the mule deer, *Odocoileus hemionus hemionus* in Wyoming. Bull. Wyoming Game Fish Comm. No. 8 : 13-22, figs.
- Lange, F. W.** News—Brazil. Micropaleontology 1 : 298.
- Languillon, J., Mouchet, J., & Rivola, E.** Contribution à l'étude du *Plasmodium ovale* (Stephens 1922) dans les territoires Français d'Afrique. Sa relative fréquence au Cameroun. Bull. Soc. Path. exot. 48 : 819-823.
- Lapchik, F. E.** [New data on Permian and Triassic deposits of the Dnieper-Donetz depression.] [Foraminifera.] Bull. Acad. Sci. URSS Geol. 6 : 59-69. [In Russian.]
- Lapkin, I. Y.** [Lime-dolomite layers of the Donetsk Permian.] Bull. Soc. Nat. Moscow Geol. 29 1954 : 37-50, figs. [In Russian.]
- Lapkin, I. Y.** see Bilik, A. A.
- Larionova, E. N., & Safonova, T. P.** [Coal deposits of the town of Sovetska and the Vyatka Plateau.] [Foraminifera.] Bull. Acad. Sci. URSS Geol. 6 : 29-41, fig. [In Russian.]
- Lasman, M.** Ontogenesis of *Paramcium caudatum*. Folia biol. 3 : 343-351.
- Lawless, D. K.** see Kuntz, R. E.
- Lawrence, J. J.** The asexual multiplication of the "malaria parasite" of Australian flying foxes. Austral. J. Sci. 18 (2) : 61-62 figs.
- Lazzari, A., & Moncharmont Zei, M.** Sulla presenza dell'Oligocene in località Porto Baddisco, sul canale d'Otranto, in Provincia di Lecce. Bull. Soc. Nat. Napoli 63 : 65-67 fig.
- Leal, J. M.** see Aragão, J. M. B. de Lebsack, W., Organic limestones of the Middle and Lower Pennsylvanian of Kansas. [Foraminifera.] Quart. J. Colorado Sch. Mines. 47 1952 : 57-70.
- LeCal, J.** Sur deux nouveaux Tintinnides. Arch. Zool. exp. gén. 91 Notes et Rev. 1953 : 1-4.
- Le Calvez, Y.** Revision des Foraminifères lutétiens du bassin de Paris. IV. Valvulinidae, Peneroplidae, Ophthalmidiidae, Lagenidae. Mém. Serv. Explicat. Carte géol. det. France 1952 : 1-64, figs.
- Le Calvez, Y., & Feugueur, L.** Les Foraminifères du "niveau d'Hérouval" à Hérouval (Oise.) Bull. Soc. géol. Fr. 3 1953 : 503-508, fig.
- Lefevre, P., & Lucas, G.** Etude de quelques sédiments marins des environs de Concarneau (Finistère.) Bull. Inst. océanogr. Monaco No. 1062 : 1-36, figs.
- Lefrou, G., & Martignoles, J.** Contribution à l'étude de *Plasmodium kochi*, *Plasmodium* des singes africains Bull. Soc. Path. exot. 48 : 227-234 figs.
- Le Gac, P., & Lamy, L.** Présentation d'un organisme observé dans un frottis de sang humain. Bull. Soc. Path. exot. 48 : 828-829 figs.
- Lehmann, D. L. (1).** A new host record for *Trypanosoma ambystomae* with the description of an additional morphological type of the parasite. J. Parasit. 41 : 552.
- Lehmann, D. L. (2).** Notes on the biology of *Trypanosoma ambystomae* Lehmann, 1954. I. The cultivation of *T. ambystomae*. J. Protozool. 2 : 28-30 figs.
- Lehmann, F. E., Manni, E., & Geiger, W.** Die Schichtenbau des Plasmalemmas von *Amoeba proteus*, ein elektronenmikroskopischen Schnittbild. Naturwissenschaften 43 : 91, figs.
- Leiner, M., Wohlfel, M., & Schmidt, D.** *Pelomyxa palustris* Greeff. Ann. Sci. nat. (Zool.) (11) 16 : 537-594, figs.
- Lemoine, M.** see Ellenberger, F.

Leonardi, P. Manufatti del paleolitico inferiore in un deposito costiero dell'Appennino Bolognese—Romagnolo. [Foraminifera.] Ann. Univ. Ferrari 1 1954 : 191–198, figs.

Levine, L., & Herrick, C. A. A comparative study of the effects of cecal coccidia on the ability of Plymouth Rock and Leghorn chickens to do muscular work. J. Parasit. 41 Suppl. : 19.

Levine, M., & Howard, J. L. Respiratory studies on mate-killers and sensitives of *Paramecium aurelia*, variety 8. Science 121 : 336–337.

Levine, N. D. A punched card system for filing parasitological bibliography cards. J. Parasit. 41 : 343–352.

Levine, N. D., Houlahan, D. A. & Mizell, M. Factors affecting the protective action of glycerol on *Trichomonas foetus* at freezing temperatures. J. Protozool. 2 Suppl. : 4.

Levine, N. D., Ivens, V., & Kruidenier, F. J. (1). Two new species of *Klossia* (Sporozoa : Adelidae) from a deer mouse and a bat. J. Parasit. 41 : 623–629 figs.

Levine, N. D., Ivens, V., & Kruidenier, F. J. (2). *Dorisiella arizonensis* n.sp., a coccidium from the desert woodrat, *Neotoma lepida*. J. Protozool. 2 : 52–53 figs.

Levine, N. D., & Marquardt, W. C. The effect of glycerol and related compounds on survival of *Tritrichomonas foetus* at freezing temperatures. J. Protozool. 2 : 110–107 figs.

Levinson, S. A. News—United States, Gulf Coast. Micropaleontology 1 : 387–388.

Lewin, R. A. Flagella-variations and enigmas. New Biol. 19 : 27–47, figs.

Lewis, D. J. see Kirk, R.

Lichtenberg, E. (1). Untersuchungen über die Auslösung der Konjugation und des Überleben der Exkonjuganten bei *Styloynchia mytilus*. Arch. Protistenk. 100 : 378–394, figs.

Lichtenberg, E. (2). Die Beeinflussung der Lebensfähigkeit und Teilungsrate von *Styloynchia mytilus* durch Außenfaktoren und Wirkstoffe. Arch. Protistenk. 100 : 395–430 figs.

Liddle, R. A. Helen Jeanne Plummer, 1892–1951. Paleont. Res. Inst. Ithaca. 1952 : 1.

Lill, G. see Ladd, H. S.

Lilly, D. M. see Henry, S. M.

Lilly, D. M. see Sterbenz, F. J.

Lincicome, D. R. Growth factor in normal rat serum for *Trypanosoma lewisi*. J. Parasit. 41 Suppl. : 15.

Lindemann, E. *Spirostomum*—an aquarium visitant. Aquarist & Pondkeeper. 20 : 157.

Lioy, F. see Carrescia, P. M.

Lips, M. see Smet, R. M. de

Lobo, A. G. S., Borba, A. M., & Souza, J. de. Contribuição ao conhecimento da distribuição geográfica dos triatomíneos domiciliários e seus índices de infecção natural pelo *S. cruzi* no Estado do Paraná. Rev. Brasil. Malariol. 6 1954 : 571–587.

Loeblich, A. R. jr. (1). News—Eastern United States. Micropaleontology. 1 : 96–98.

Loeblich, A. R. jr. (2). Reprint of Sherborn's "An index to the genera and species of the foraminifera." Micropaleontology. 1 : 287.

Loeblich, A. R. jr., & Tappan, H. (1). A revision of some glanduline Nodosariidae. (Foraminifera.) Smithsonian misc. Coll. 126 : 1–9, fig.

Loeblich, A. R. jr., & Tappan, H. (2). Revision of some recent foraminiferal genera. Smithsonian misc. Coll. 128 : 1–37, figs.

Loghem, J. J. van. Nicolaas Hendrik Swellengrebel. Doc. Med. geogr. trop. 7 : 299–301. portrait.

Lom, J. [Pathologische Veränderungen im Makronukleus des Infusoriums *Nyctotherus cordiformis* Stein in der Kultur.] Mem. Soc. zool. tchechosl. 19 : 163–174, figs. [Czech with German summary.]

Lombard, A. Nouvelles données sur un coupe de contact Jurassique-Crétaçé des Préalpes medianes en Chablais (Haute-Savoie.) [Foraminifera.] Eclog. geol. Helvetic. 45 1952 : 37-39.

Loran, M. R., Kerner, M. W., & Anderson, H. H. Cytochemical differentiation of components of *Entamoeba histolytica* (with special reference to variations occurring with different associated organisms.) Exper. Parasit. 4 : 542-547, figs.

Loretti, G. A. see Manso Soto, A. E

Loubatières, R. Contribution à l'étude des grégariomorphes Monocystidae parasites des Oligochètes du Languedoc-Roussillon. Ann. Sci. nat. (Zool.) (11) 17 : 73-201, figs.

Loxley, O. J. R. Effect of Indian ink on *Plasmodium berghei* infections in mice. Nature, Lond. 178 : 705 figs.

Lozac'h, M., & Vialat, C. Toxoplasmosis du chien en France. Ann. Inst. Pasteur 88 : 526-528.

Lubinsky, G. (1). On some parasites of parasitic protozoa. I. *Sphaerita hoari* sp.n., a Chytrid parasitizing *Eremoplastron bovis*. Canad. J. Microbiol. 1 : 440-450, figs.

Lubinsky, G. (2). On some parasites of parasitic protozoa. II. *Sagittospora cameroni* gen.n., sp.n., a Phycomycete parasitizing Ophryoscoleciidae. Canad. J. Microbiol. 1 : 675-684 figs.

Lucas, G. Oolithes marines actuelles et calcaires oolithiques récents sur le rivage africain de la Méditerranée Orientale (Egypte et Sud Tunisien.) [Foraminifera.] Bull. St. Oceanogr. Salammbo 52 : 19-38, figs.

Lucas, G. see Lefèvre, P.

Lucas, J. M. S. Transmission of *Trypanosoma congolense* under field conditions in the absence of tsetse flies. Vet. Rec. 67 : 403-407.

Lucena, D. T. de & Costa, L. Epidemiologia da doença de Chagas na Paraíba. Rev. Brasil. Malariol. 6 1954 : 229-265, figs. [English summary.]

Lunde, M. N. see Mackie, T. T.

Lwoff, A. see Hutner, S. H.

Lydon, F. L. *Trichomonas vaginalis* infection in the male. Brit. med. J. 2 : 1447-1448.

Lys, M., & Grekoff, N. Microfaunes du Crétacé supérieur et du Paléocene, leur utilisation en Afrique équatoriale française. Proc. Third World Petr. Cong. 1 1951 : 490-496, fig.

MacArthur, W. An account of some of Sir David Bruce's researches, based on his own manuscript notes. [Trypanosomes.] Trans. R. Soc. trop. Med. Hyg. 49 : 404-412, figs.

McCarthy, D. A. see Thompson, P. E.

McCarthy, D. D., Marples, M. J., Bacon, D. F., & Fitzgerald, N. Researches in Western Samoa. I. General sanitation and intestinal parasites. Trans. R. Soc. trop. Med. Hyg. 49 : 71-75.

McCashland, B. W. Adaptation of *Tetrahymena* to potassium cyanide. I. Adaptive reversal of cyanide inhibition of growth. J. Protozool. 2 : 97-100.

McConnachie, E. W. Studies on *Entamoeba invadens* Rodhain, 1934, *in vitro*, and its relationship to some other species of *Entamoeba*. Parasitology 45 : 452-481, figs.

McCowen, M. C., & Callender, M. E. The isolation of *Endamoeba histolytica* from experimental infections in rats. Proc. Indiana Acad. Sci. 64 : 254.

McCroan, J. E. see Routh, C. F.

McGhee, R. B. Comparative susceptibility of erythrocytes from mammals and birds to infection by four species of avian malaria. J. Parasit. 41 Suppl. : 19.

McGinitie, G. E. Distribution and ecology of the marine invertebrates of Point Barrow, Alaska. Smithson. Misc. Coll. 128 : 1-201.

McGuire, W. C. Blood-induced Blackhead. J. Parasit. 41 Suppl. : 14.

Mackie, J. W. see Mackie, T. T.

Mackie, T. T., Mackie, J. W., Vaughn, C. M., Gleason, N. N., Greenberg, B. G., Nenninger, E. S., Lunde, M. N., Moore, L. L. A., Klutzz, J. A., & Taliafero, M. O. Intestinal parasitic infections in Forsyth County, North Carolina. III. Amoebiasis in school children, an index of prevalence. Amer. J. trop. Med. Hyg. 4 : 980-988.

McKinnon, J. A. & Fendall, N. R. E. Kala-azar in the Baringo district of Kenya. J. trop. Med. Hyg. 58 : 205-209 maps.

Mackinnon, J. E., & Abbott, P. A Sudanese case of sarcosporidiosis. Ann. trop. Med. Parasit. 49 : 308-310, figs.

McLaughlin, J. J. A. see Provasoli L.

McLoughlin, D. K. (1). Cystic phenomena in the ciliate *Blepharisma undulans*. J. Protozool. 2 Suppl. : 11.

McLoughlin, D. K. (2). Macro-nuclear morphogenesis in the ciliate *Blepharisma undulans*. J. Protozool. 2 Suppl. : 11.

Mackiewicz, J. S. Incidence studies on *Trypanosoma diemyctyli* Tobey, 1906 in *Diemyctylus v. viridescens* (Raf.). J. Parasit. 41 Suppl. : 15.

Maegraith, B. G. The pathogenicity of plasmodia and entamoebae. In : Mechanisms of microbial pathogenicity, 5th Sympos. Soc. Gen. Microbiol., London 1955 : 207-229.

Maegraith, B. G. & Deegan, T. (1) Storage of haemozoin and haemosiderin in *P. berghei* infections. (2) The fate of Fe⁵⁹ during *P. berghei* infection in the rat. (3) The secretion of Fe⁵⁹ in the kidney in advanced *P. berghei* infection in the rat. Trans. R. Soc. trop. Med. Hyg. 49 : 2.

Mafra, H. see Portugal, O. P.

Magné, A. see Vigneaux, M.

Magné, J., & Sigal, J. Sur la position stratigraphique d'un niveau-repère à Radiolaires (Albien élevé et Vraconien) en Algérie. Bull. Soc. géol. Fr. 3 1953 : 345-354, figs.

Magné, J. see Cheylan, G.

Magné, J. see Delga, M. D.

Magné, J. see Glintboeckel, C.

Magné, J. see Laffitte, R.

Majzon, L. (1). Ujabb öslénytani adatok Ipolytarnocrol. Földt. Közl. 80 1950 : 262-264. [Hungarian.]

Majzon, L. (2). Foraminiferas-faciesek és réteglani jelentőségük az olajkutatásban. Földt. Közl. 83 1953 299-304, fig.

Majzon, L. (3). Mikropaeontológiai adatok a Dachsteini Mészkő foraminifera-faunajahoz. [Foraminifera.] Földt. Közl. 84 1954 : 367-369, figs.

Malanga, C. M. see Cuckler, A. C.

Manier, J. F. Classification et nomenclature des Trichomycètes. Ann. Sci. nat., Zool. 17 : 395-397.

Manier, J. F. see Tuzet, O.

Manners, D. J., & Ryley, J. F. Studies on the metabolism of the Protozoa. 6. The glycogens of the parasitic flagellates *Trichomonas foetus* and *Trichomonas gallinae*. Biochem. J. 59 : 369-372.

Manni, E. see Lehmann, F. C.

Mansjoer, M. see Kraneveld, F. C.

Manso Soto, A. E., & Loretti, G. A. Cultivo del *Trypanosoma cruzi* en huevo de gallina incubado. Publ. Mision Estud. Patol. Reg. Argent. Nos. 85-86 : 5-14.

Manso Soto, A. E., Loretti, G. A., & Miatello, C. S. Antígeno chagásico liofilizado. Publ. Mision Estud. Patol. Reg. Argent. Nos. 85-86 : 15-20.

Manson-Bahr, P. Facts and fallacies in the diagnosis of amoebiasis. Central Afr. J. Med. 1 : 269-279 figs.

Manson-Bahr, P. E. C. A primary skin lesion in visceral leishmaniasis. Nature, Lond. 175 : 433-434.

Mansour, N. S. see Blagg, W.

Mansour, N. S. see Kuntz, R. E.

Manwell, R. D. (1). Some evolutionary possibilities in the history of the malaria parasites. Indian J. Malar. 9 : 247-253 figs.

Manwell, R. D. (2). The blood protozoa of seventeen species of sparrows and other Fringillidae. *J. Protozool.* **2** : 21-27.

Manwell, R. D. (3). Relative incidence of blood parasites in robins of central New York and the High Rockies. *J. Protozool.* **2** : 85-88.

Manwell, R. D. *see* Khabir, P.

Manwell, R. D. *see* Okpala, I.

Marchbank, D. F. *see* Huff, C. G.

Marcus, H. *see* Rinehart, R. E.

Margalef, R. (1). Materiales para hidrobiología de la isla de Mallorca. *Publ. Inst. Biol. apl. Barcelona* **15** 1953 : 5-111, figs. [English summary]

Margalef, R. (2). Contribución al estudio de la fauna de las aguas dulces del noroeste de España. *Publ. Inst. Biol. apl. Barcelona* **21** : 137-171, figs. [English summary.]

Marie, P. *see* Feugueur, L.

Mariella, I. *see* Oreste, P.

Markali, J. *see* Gaarder, K. R.

Markov, G. S., & Rogoza, M. L. [Annual differences in the parasitic fauna of the frog (*Rana temporaria* L.)]. [Incl. protozoa.] *Zool. Ž.*, Moscow **34** : 1203-1209 [In Russian.]

Markov, G. S. *see* Andruško, A. M.

Marneffe, J. Observation d'un foyer de trypanosomiase rhodesienne en Urundi. *Ann. Soc. Belge Méd. trop.* **35** : 357-388.

Marple, M. F. Small foraminifera of the Pottsville formation in Ohio. *Ohio J. Sci.* **55** : 81-89, figs.

Marbles, M. J. *see* McCarthy, D. D

Marquardt, W. C. *see* Levine, N. D.

Martignolles, J. *see* Lefrou, G.

Martin, W. B. *see* Butzel, H. M. jr.

Martin, W. B. *see* Campbell, R. S. F.

Martinis, B. (1). La microfauna dell'affioramento pliocenico di Casanova Lanza (Como). [Foraminifera.] *Rev. ital. Paleont.* **56** 1952 : 55-64..

Martinis, B. (2). Richerche stratigrafiche e micropaleontologiche sul Pliocene piemontese. [Foraminifera.] *Riv. Ital. Paleont.* **60** 1954 : 45-194.

Martrenchar, C. *see* Pautrizel, R.

Maruashvili, G. M. Natural nidi of some transmissive parasitic diseases in Georgia. [Leishmaniasis.] In : *Natural nidi of human diseases and regional epidemiology*. Leningrad 1955 : 318-324. [In Russian.]

Maryon, M. *see* Shute, P. G.

Masseguin, A., & Palinacci, A. Présence de *Plasmodium ovale* Stephens 1922, en Haute-Volta (Afrique Occidentale Française.) *Bull. Soc. Path. exot.* **48** : 170-174 figs.

Mathis, M. *see* Durand, P.

Matsumoto, K. On the two new Myxosporidia, *Chloromyxum musculoliquefaciens* sp. nov. and *Neochloromyxum cruciformum* gen. et sp. nov. from the jellied muscle of swordfish *Xiphias gladius* Linné, and common Japanese sea-bass *Lateolabrax japonicus* (Temmink et Schlegel). *Bull. Jap. Soc. sci. Fish.* **20** 1954 : 469-477, figs.

Matsunaga, T. *Oinomikadoina ogiensis* n.gen., n. sp., from the Pliocene of Niigata, Japan. *Trans. Proc. Palaeont. Soc. Japan* **15** 1954 : 163-164, figs.

Matsuo, H. *see* Hayasaka, I.

Mattauer, M. *see* Cheylan, G.

Matthes, D. (1). Die Herkunft isopodobionter Ciliaten im Lichte zweier neuer Funde. *Arch. Protistenk.* **100** : 331-338 figs.

Matthes, D. (2). Über eine an *Hydraena britteli* Joy gebundene *Orbopercularia* (*O. lusti* n.sp.) und das Vorkommen Individuengruppen umschliessender Gehäuse bei "aloricate" Peritrichen. *Arch. Protistenk.* **100** : 435-446, figs.

Matthes, D. (3). *Orbopercularia lusti*, ein neues peritriches Infusor. *Mikrokosmos* **45** : 57-59, figs.

Matthes, D. (4). Eine neue *Epistylis*-Art aus der Adria. *Zool. Anz.* **154** : 193-194, fig.

Matubayasi, H. On a new species of Coccidia parasitic in the Gecko, *Gekko japonicus*. Zool. Mag., Tokyo 53 1941 : 312-314, figs.

Maugis, P. *see* Gubler, Y.

Maync, W. (1). A Correction. [Foraminifera.] Micropaleont. 5 1951: 24.

Maync, W. (2). *Dictyoconus walnutenensis* (Carsey) in the Middle Albion Guacharo Limestone of Eastern Venezuela. Cont. Cush. Fdn. 6 : 85-93, figs.

Maync, W. (3). *Coskinolina sunnilandensis* n.sp., a Lower Cretaceous (Urgo-Albian) species. Cont. Cush. Fdn. 6 : 105-111, figs.

Maync, W. (4). *Reticulophragmium*, n. gen., a new name for *Alveolophragmium stschedrina*, 1936 (pars). J. Paleont. 29 : 557-558.

Maync, W. (5). On some erroneous or questionable determinations of *Choffatella*. Micropaleontology 1 : 269-272, figs.

Maync, W. *see* Rod, E.

Mazia, D., & Prescott, D. M. Protein synthesis in the nucleus. Nature, Lond. 175 : 300-301.

Medina, R. *see* Pifano, F.

Medina Febres, M. *see* Pifano, F.

Meiklejohn, J. Soil microbiology. Some microbiological methods and results. J. Quekett micr. Cl. (4) 4 : 171-184, figs.

Mellon, A. D. *see* Wolken, J. J.

Melton, M. L., & Jacobs, L. Repeated enhancement in virulence of a strain of *Toxoplasma* by passage in mice. J. Parasit. 41 Suppl. : 21-22.

Melton, M. L. *see* Jacobs, L.

Melvin, D. M. The microscopic detection and identification of malaria parasites in preparations from clotted blood. Amer. J. trop. Med. Hyg. 4 : 712-715.

Melvin, D. M., & Brooke, M. M. Triton X-100 Giemsa staining of blood parasites. Stain Technol. 30 : 269-275.

Melvin, D. M. *see* Brooke, M. M.

Mendonça, I. de A. *see* Meyer, H.

Menyailenko, P. B. *see* Semikhatova, S. V.

Menzel, R. W. & Hopkins, S. H. The growth of oysters parasitized by the fungus *Dermocystidium marinum* and by the trematode *Bucephalus ceculus*. [Haplosporidia.] J. Parasit. 41 : 333-342.

Meyer, H., & Mendonça, I. de A. Electron microscopic observations of *Toxoplasma Nicolle et Manceaux* grown in tissue cultures. (First note.) Parasitology 45 : 449-451 figs.

Meyer, H. *see* Oliveira, M. X. de

Miatello, C. S. *see* Manso Soto, A. E.

Michaelson, J. B. *see* Blumenthal, H.

Michaelson, J. B. *see* Hallman, F. A.

Michel, P. *see* Gubler, Y.

Micks, D. W. Factors influencing the susceptibility of mosquitoes to malarial parasites. J. Parasit. 41 Suppl. : 32.

Mikami, K. Geology of the east margin of the Tanzawa Massif. [Foraminifera.] Sci. Rep. Yokohama Nat. Union (2) 4 : 41-64, figs.

Miklukho-Maklai, A. D. [New data on Permian fusulinids from the southern region of the U.S.S.R.] C. R. Acad. Sci. U.R.S.S. 105 : 573-576, fig. [In Russian.]

Miklukho-Maklai, A. D. *see* Kuznetsov, S. S.

Mitchison, N.A. Evidence against micronuclear mutations as the sole basis for death at fertilization in aged, and in the progeny of ultra-violet irradiated, *Paramecium aurelia*. Genetics 40 : 61-75, fig.

Miyake, A. The effect of urea on binary fission in *Paramecium caudatum*. J. Inst. Polyt. Osaka. 6D : 43-57, figs.

Mizell, M. *see* Levine, N. D.

Mizinov, I. V. *see* Vostryakov, A. V.

Moebius, R. E. *see* Ball, G. H.

Moewus, F. Interrelations between growth and sexuality in a homothallic strain of *Polytoma uvella*. J. Protozool. 2 Suppl. : 7.

Mohan, B. N. (1). Comparative susceptibility of some *Aedes* mosquitoes to *Plasmodium gallinaceum*. Indian J. Malar. 9 : 75-79.

Mohan, B. N. (2). Comparative experimental infections in *Anopheles fluviatilis* and *Anopheles stephensi* (type) with *Plasmodium falciparum* Welch, 1897. Indian J. Malar. 9 : 81-84.

Mohan, B. N. (3). Sporogony cycle of malaria parasites in resistant and non-resistant strains of mosquitoes after exposure to D.D.T. Indian J. Malar. 9 : 287-296.

Mohan, B. N. see Jaswant Singh.

Mohr, W., Wahle, H., & Stammer, A. Experimentelle Toxoplasmainfektion beim Rhesusaffen. Z. Tropenmed. Parasit. 6 : 386-430 figs. [English summary.]

Moiseev, A. S. [On the corals and other organisms in the limestones of Primore-land.] [Foraminifera.] Trud. Leningrad Soc. Nat. 68 1951 : 208-237. [In Russian.]

Molfi, A. see Kubiak, G. V. L.

Molinari, V. Action du froid sur les trophozoites d' *Entamoeba histolytica*. Bull. Soc. Path. exot. 48 : 814-816.

Moncharmont Zei, M. (1). La microfaune della argille pleistoceniche di Cutrofiano (Lecce.) Bull. Soc. Nat. Napoli 63 : 3-18, fig.

Moncharmont Zei, M. (2). Sulla presenza del gen. *Globotruncana* CUSH. in una serie calcareo-marnosa a liste di selce presso Rodi Garganico (Foggia.) Boll. Soc. Nat. Napoli 63 : 63-64.

Moncharmont Zei, M. see Lazzari, A.

Montiel, B. O. N. see Scorza, J. V.

Moon, A. P. see Frick, L. P.

Moore, E. L., & Shields, J. A. Chimire field, Anzoategui, Venezuela. [Foraminifera.] Bull. Amer. Ass. Petrol. Geol. 36 1952 : 857-877, figs.

Moore, L. L. A. see Mackie, T. T.

Moreno, J. see Torrealba, J. F.

Morera, P. see Céspedes, R.

Morikawa, R. (1). Limestone block at Shimokutsu, Saitama Prefecture. [Foraminifera.] J. geol. Soc. Japan. 57 1951 : 265. [in Japanese.]

Morikawa, R. (2). Shimokutzu conglomerate. [Foraminifera.] J. geol. Soc. Japan. 58 1952 : 187-190, fig. [English summary.]

Morikawa, R. (3). Fusulinidae from Kanokura-sawa and Sakamoto-sawa, Kitakami mountainland. J. geol. Soc. Japan 58 1952 : 312. [in Japanese.]

Morikawa, R. (4). Schwagerininae in the vicinity of the Shomaru Pass, eastern part of Kanto mountainland, Central Japan. Sci. Rep. Saitama Univ. 2B : 45-114, figs.

Morin, H. G. S. La capacité de production de gamètes par l'hématotozoaire, facteur épidémiologique du paludisme. Bull. Soc. Path. exot. 48 : 333-337.

Morini, E. G., Boero, J. J., & Rodríguez, A. Parasitos intestinales en el "Marra" (*Dolichotis patagonum patagonum*). [Coccidia.] Publ. Mision Estud. Patol. Reg. Argent. Nos. 85-86 : 83-89, figs.

Morishima, M., & Chiji, M. Recent foraminifera from the Akkeshi Bay, Hokkaido ; ecological record of recent foraminiferal associations. J. geol. Soc. Japan. 58 1952 : 312. [in Japanese.]

Morita, H. *Fusulina* limestone from the vicinity of Nojiri Machi, Kiso Province. J. geol. Soc. Japan 58 1952 : 443. [In Japanese.]

Mortelmans, J. see Deom, J.

Moskvitin, A. I. see Vostryakov, A. V.

Mota Marques, J. M. de. Nota sobre o calcário oolítico de Diu. Bol. Soc. géol. Portugal. 9 1951 : 191-194, figs.

Mouchet, J. see Languillon, J.

Moulder, J. W., & Taliaferro, W. H. Reactions of the connective tissue in chickens to *Plasmodium gallinaceum* and *Plasmodium lophurae*. II. Glucose metabolism during initial infections. *J. inf. Dis.* **97** : 137-142, fig.

Mudrow-Reichenow, L. see Bock M.

Mühlfordt, H. see Franco, A.

Müller-Liebenau, I. Einige neue Funde von *Folliculina boltoni* Kent in Ostholstein. *Zool. Anz.* **154** 1954 : 89-98, figs.

Mugaburu, L. G. *Eimeria weissi* nov. sp. (Coccidiida, Eimeriidae.) *Rev. Cienc., Lima.* **48** 1946 : 91-110, figs. [English summary.]

Mugard, H., & Courtey, B. Paralysie des Infusoires ciliés au moyen des phosphates alcalins. *Bull. Soc. zool. Fr.* **80** : 196-205.

Mulligan, H. W. Recent investigations on trypanosomiasis in British West Africa. *Trans. R. Soc. trop. Med. Hyg.* **49** : 199-228.

Muniz, J., & Soares, R. de R. L. Nota sobre um parasito do gênero *Plasmodium* encontrado no "Rampastos toco Müller, 1776, "tucanão", e diferente do *Plasmodium huffi*: *Plasmodium pinottii* n. sp. *Rev. Brasil. Malariol.* **6** 1954 : 611-617. [English summary.]

Muraour, P. (1). Sur quelques sédiments dragués au large du littoral compris entre le Cap Djinet et l'embouchure de l'Oued Sebaou. [Foraminifera.] *Bull. Sta. Aquic. Pêche Castiglione (N.S.)* **7** : 89-108, figs.

Muraour, P. (2). Etude d'une vase prélevée à 700 mètres de profondeur au large de la Baie de Castiglione. [Foraminifera.] *Bull. Sta. Aquic. Pêche Castiglione (N.S.)* **7** : 121-133, figs.

Murata, S. (1). On the paleo-ecological investigation of the fossil foraminiferal fauna in the Miyazaki group, with descriptions of new species. *Bull. Kyushu Inst. Tech.* **1** 1951 : 91-104.

Murata, S. (2). *Cyclammina* from the Miyazaki group. *J. geol. Soc. Japan.* **57** 1951 : 255. [in Japanese.]

Murata, S. (3). Tertiary *Cyclammina* in Kyushu. *Bull. Kyushu Inst. Tech.* **2** 1952 : 62-68, fig.

Murata, S. (4). Fossil *Cyclammina* from the Miyazaki Group, Kyushu. *Bull. Kyushu Inst. Tech.* **2** 1952 : 87. [Abstract in Japanese.]

Murata, S. (5). Miocene *Cyclammina* in the vicinity of Matsue City, Shimane Prefecture, Japan. *Bull. Kyushu Inst. Tech.* **2** 1952 : 87. [Abstract in Japanese.]

Murata, S. (6). Smaller foraminifera from the Miocene deposits of the Miyosi and Tuyama basin, Tyugoku, west Japan. [Foraminifera] *J. geol. Soc. Japan* **58** 1952 : 491-492, fig. [Abstract in Japanese.]

Murata, S. (7). Paleogene Foraminifera in the Chikuho coal-field, Kyushu. *Bull. Kyushu Inst. Tech.* **3** 1953 : 55-62, fig.

Murata, S. (8). Miocene foraminifera in Chugoku, Japan. *Bull. Kyushu Inst. Tech.* **4** 1954 : 63-75, figs.

Murgoci, A. see Ionescu, M. A.

Murray, G. E. Vicksburg Stage and Mosley Hill Formation. [Foraminifera.] *Bull. Amer. Ass. Petr. Geol.* **36** 1952 : 700-707.

Nadel, E. M., Greenberg, J., Jay, G. E., & Coatney, G. R. Backcross studies of the genetics of resistance to malaria in mice. *Genetics* **40** : 620-626 figs.

Nair, C. P. see David, A.

Nakamura, M. Growth factors for *Endamoeba histolytica*. *Proc. Soc. exp. Biol. Med.* **89** : 680-682.

Nakamura, M. see Asami, K.

Nakkady, S. E. (1). The stratigraphy and geology of the district between the northern and southern Galala plateaus (Gulf of Suez coast, Egypt.) [Foraminifera.] *Bull. Inst. Egypt.* **36** : 253-268, fig.

Nakkady, S. E. (2). The stratigraphical implication of the accelerated tempo of evolution in the Mesozoic-Cenozoic transition of Egypt. *J. Paleont.* **29**: 702-706, figs.

Nanney, D. L. Mating type determination and inheritance in *Tetrahymena pyriformis*, variety I. *Genetics* **40**: 587 (Abstract.)

Nanney, D. L., & Caughey, P. A. An unstable nuclear condition in *Tetrahymena pyriformis*. *Genetics* **40**: 388-398.

Nanney, D. L., Caughey, P. A., & Tefankjian, A. The genetic control of mating type potentialities in *Tetrahymena pyriformis*. *Genetics* **40**: 668-680, figs.

Naquira, F., & Naquira, N. Contribución al estudio de la enfermedad de Chagas. Enuesta epidemiologica en el sur del Peru. *Bol. Chilen. Parasit.* **10**: 29-31. [English summary.]

Naquira, F., Neghme, A., & Thiermann, E. Toxoplasmosis humana. *Bol. Chilen. Parasit.* **10**: 11-15. [English summary.]

Naquira, N. *see* Naquira, F.

Narasimhamurti, C. C. *see* Ganapati, P. N.

Naruse, Y. Geology of the eastern part of Sagamino Upland. [Foraminifera.] *J. geol. Soc. Japan.* **58** 1952: 423-432, figs. [English summary, p.432.]

Nasagawa, Y. *see* Hara, K.

Nathan, H. A., & Cowperthwaite J. "Crithidia factor"—a new member of the folic acid group of vitamins. *J. Protozool.* **2**: 37-42.

Nathan, H. A., Petersen, R. A., Rodriguez, E., & Hutner, S. H. Improved chemically defined media for Trypanosomatidae of insects. *J. Protozool.* **2 Suppl.**: 10.

Nauck, E. G. Toxoplasmosis. *Bol. Lab. Clin. "L. Razetti"*, Caracas **16**: 703-718 figs. [In Spanish.]

Neal, R. A., & Vincent, P. Strain variation in *Entamoeba histolytica*. I. Correlation of invasiveness in rats with the clinical history and treatment of the experimental infections. *Parasitology* **45**: 152-162.

Neal, R. A. *see* Hoare, C. A.

Nedela-Devidé, D. Sur la présence de genre *Globotruncana* dans la Medvednica Zrinska Gora, Boka Kotoroka et dans les environs de Budva. *Geol. Vjesn.* **5-7** 1954: 299-315, figs.

Neghme, A., Silva, R., & Artigas J. El laboratorio en el diagnostico de la amibirosis intestinal. *Bol. Chilen. Parasit.* **10**: 66-71. [English summary.]

Neghme, A. *see* Naquira, F.

Nelson, E. C., & Jones, M. M. Some factors related to *Entamoeba histolytica* growth on rice products in a simple medium. *Amer. J. trop. Med. Hyg.* **4**: 822-832.

Nemkov, G. I. [Systematics and morphology of Nummulites.] *Bull. Soc. Nat. Moscow. geol.* **1**: 97-98.

Nemkov, G. I., & Khloponin, K. L. [On the age of the Lower Menilite Horizon of the Eastern Carpathians.] [Foraminifera.] *C. R. Acad. Sci. U.R.S.S.* **104**: 758-760. [In Russian.]

Nenniger, E. S. *see* Mackie, T. T.

Nery-Guimarães, F. (1). Estudo de um foco de leishmaniose mucocutânea na Baixada Fluminense (Estado do Rio de Janeiro.) *Mem. Inst. O. Cruz* **53**: 1-11, figs. [English summary.]

Nery-Guimarães, F. (2). Notas bio-bibliograficas do Prof. Dr. Henrique de Beaurepaire Aragão, Diretor emerito do Instituto Oswaldo Cruz. *Mem. Inst. O. Cruz* **53**: 144-156 portrait.

Nesslinger, C. L. The incidence of Opalinid infusorians in two species of tadpoles. *J. Parasit.* **41**: 640.

Nesterenko, L. P. *see* Kireeva, G. D.

Neumann, M. Le genre *Linderina* et quelques autres Foraminifères l'accompagnant dans le Nummulite que d'Aquitane. Bull. Soc. géol. Fr. **4** 1954 : 55-59, figs.

Nigrelli, R. F., Jakowska, S., & Padnos, M. Pathogenicity of epibionts in fishes. J. Protozool. **2** Suppl. : 7.

Nigrelli, R. F. see Jakowska, S.

Noble, E. R. The morphology and life-cycles of trypanosomes. Quart. Rev. Biol. **30** : 1-28 figs.

Noble, G. A. *Entamoeba bubalis* n. sp., from carabao. J. Protozool. **2** : 19-20 figs.

Nobrega, P., Trapp, E., & Giovannoni, M. (1). Spontaneous toxoplasmosis in the domestic fowl. Arq. Inst. biol. S. Paulo. **22** : 43-49, figs. [Portuguese with English summary.]

Nobrega, P., Trapp, E. E., & Giovannoni, M. (2). Toxoplasmose epizootica em coelhos. II. Fenômenos de imunidade e resistência nos animais sobreviventes. Rev. Brasil. Biol. **15** : 377-382, fig.

Nobrega, P. see Reis, J.

Nodake, Y. see Asami, K.

Norman, L., & Brooke, M. M. (1). The use of penicillin and streptomycin in the routine cultivation of amoebae from fecal specimens. Amer. J. trop. Med. Hyg. **4** : 472-478.

Norman, L., & Brooke, M. M. (2). The effectiveness of the PVA-fixative technique in revealing intestinal amoebae in diagnostic cultures. Amer. J. trop. Med. Hyg. **4** : 479-482.

Nosina, V. D. Further researches on experimental chemotherapy of amoebiasis. In: Natural nidi of human diseases and regional epidemiology. Leningrad. **1955** : 361-366. [In Russian.]

Nowak, W. [Significance of the genus *Hantkenina* in stratigraphy.] Przegląd. Geol. **9** 1954 : 377-380, fig.

Numa, R. I. see Toranzos, L. B.

Nussenzweig, R. S. see Nussenzweig, V.

Nussenzweig, V., Nussenzweig, R. S., Freitas, J. L. P. de., Amato Neto, V., Biancalana, A., & Kloetzel, J. Ação de agentes físicos e químicos sobre o *Trypanosoma cruzi* in vitro. Hospital, Rio de Jan. **45** 1954 : 589-599. [English summary.]

Nyirö, R. M. Uj Oligocén foraminiferek a Budapest-környéki katti rétegekből. Földt. Közl. **84** 1954 : 67-74, figs. [French & Russian summaries.]

Obata, K. Reports on some gregarines from Japanese insects. (1). J. Sci. Hiroshima Univ. (Zool.) **14** 1953 : 1-34, figs.

Oberhauser, R. Ein Vorkommen von *Involutina liassica* (Jones) im Distrikt Eskisehir. Bull. geol. Soc. Turk. **5** 1954 : 203-206, figs.

Obi, K. On the Foraminifera from a boring core in the Tokyo City. Nat. Sci. & Mus. Tokyo. **22** : 1-4, figs. [In Japanese.]

O'Connor, H. G., & Jewett, J. M. The Red Eagle Formation in Kansas. [Foraminifera.] Bull. Kansas St. Geol. Survey. **96** 1952 : 329-362, fig.

Offutt, A. C. see Brooke, M. M.

Ogose, S. On the mode of occurrence of fossils in the Mizunami group in eastern Mino, Japan. [Foraminifera.] J. geol. Soc. Japan **58** 1952 : 477-486, fig. [English summary p.486.]

Oka, S. see Hara, K.

Okamoto, J. On the influence of *Clostridium perfringens* upon the experimental infection of *Entamoeba histolytica* in rats. Keio J. Med. **3** 1954 : 121-127.

Okpala, I., & Manwell, R. D. Chemotherapy of avian malarias: III. Trial of certain standard anti-malarials on *Plasmodium hexamerium* and *P. elongatum* malaria in ducks. J. Parasit. **41** : 65-70, fig.

Olberg, H. Über die Bluteiweiß-veränderungen bei experimenteller Infektion von Mäusen mit *Trypanosoma brucei*. Zbl. Bakt. (I. Orig.) **162** : 120-135 figs. [English summary.]

Oliveira, M. X. de., & Meyer, H. *Plasmodium gallinaceum* in tissue culture. Observations after one year of cultivation. *Parasitology* **45** : 1-4, figs.

Olmedo, R. *see* Coutts, W. E.

Oreste, P., & Mariella, I. Sul significato delle alternanze stratigrafiche del Pliocene antico nella zona di Capo Spertivento. [Foraminifera.] *Mem. Soc. tosc. Sci. nat.* **61-A** 1954 : 108-118, figs.

Orfila, J. *see* Fabiani, G.

Orlova, I. N. [New genus of the family Archaediscidae Tchern. 1948.] *C. R. Acad. Sci. U.R.S.S.* **102** : 621-622, fig. [In Russian.]

Orr, P. E. jr. *see* Sprague, V.

Osipovsky, A. I. [Acquired immunity against coccidiosis in rabbit.] *Journ. gen. Biol., Moscow* **16** : 64-68. [In Russian.]

Osman, A. (1). Facies analysis of the Mesozoic surface and sub-surface formations of Abu-Roash based on percentages of characteristic microfaunal families and genera. [Foraminifera.] *Bull. Inst. égypt.* **36** : 177-180, fig.

Osman, A. (2). Micro-stratigraphy of the Upper Cretaceous formations of Abu-Roash. [Foraminifera.] *Bull. Inst. égypt.* **36** : 181-191, figs.

Otto, I. *see* Alba, M.

Ottova, L. The dependence of the consumption of oxygen of the ciliate *Tetrahymena geleii* Fung. on some biological, chemical and physical factors. *Mem. Soc. zool. tchechosl.* **19** : 1955 : 269-286. [Czech with English summary.]

Oxford, A. E. The rumen ciliate protozoa : their chemical composition metabolism, requirements for maintenance and culture, and physiological significance for the host. *Exper. Parasit.* **4** : 569-605.

Oxford, A. E. *see* Eadie, J. M.

Padmavathi, P. B. (1). The micro-nuclei of *Spirostomum ambiguum* Ehrbg.—(Protozoa : Ciliata.) *Curr. Sci.* **24** : 241-242, figs.

Padmavathi, P. B. (2). Observations on the nuclear apparatus of *Spirostomum ambiguum* Müll.-Ehrbg. *J. zool. Soc. India* **7** : 91-100, figs.

Padnos, M. *see* Nigrelli, R. F.

Paladino, N. *see* Carvalhal, S.

Paladino, N. *see* Portugal, O. P.

Paladino, N. *see* Uvo, D.

Paletz, L. S. *see* Bilik, A. A.

Palinacci, A. *see* Masseguin, A.

Pan, C. T., & Geiman, Q. M. Comparative studies of intestinal amoebae. I. Distributions and cyclic changes of the nucleic acids in *Endamoeba histolytica* and *Endamoeba coli*. *Amer. J. Hyg.* **62** : 66-79 figs.

Papp, A. (1). Orbitoiden aus der Oberkreide der Ostalpen (Gosau-schichten.) S.B. öst. Akad. Wiss. Abt. I. **164** : 303-315, figs.

Papp, A. (2). Die Foraminiferenfauna von Guttaring und Klein St. Paul (Kärnten.) IV. Biostratigraphische Ergebnisse in der Oberkreide und Bermerkungen über die Lage- rung des Eozäns. S.B. öst. Akad. Wiss. Abt. I. **164** : 317-334, figs.

Papp, A., & Thenius, E. Vösendorf—ein Lebensbild aus dem Pannon des Wiener Beckens. *Mitt. geol. Ges. Wien.* **46** 1954 : 1-109, figs.

Paraense, W. L. The discovery of the schizogony cycle in the pigeons' Halteridium and its influence on the advancement of protozoology. *Mem. Inst. O. Cruz* **53** : 411-420. [In Portuguese and English.]

Párducz, B. Reizphysiologische Untersuchungen an Ziliaten. III. Über die Peristomalziliien von *Paramecium*. *Ann. hist. nat. Mus. hung. N.S.* **6** : 189-195, fig.

Parker, F. L. (1). Ecology of foraminifera from San Antonio Bay and environs, southwest Texas. *Spec. Publ. Cush. Fdn.* **2** 1953 : 1-75, figs.

Parker, F. L. (2). *Bolivina dagariensis*, nom. nov. *Cont. Cush. Fdn.* **6** : 52.

Parker, F. L. *see* Phleger, F. B.

Parra Ormeño, B. E. (1). Consideraciones sobre la morfología de *Babesia bigemina* en nuestro medio. Rev. Cienc., Lima 54 1952 : 266-271, figs. [English summary.]

Parra Ormeño, B. E. (2). *Babesia argentina* en el ganado vacuno del país. Rev. Cienc. Lima 54 1952 : 272-275 figs. [English summary.]

Parrot, L. (1). Sur l' "immunité" dans les paludismes. Arch. Inst. Pasteur Algér. 33 : 223-225.

Parrot, L. (2). Sur l' immunité dans les paludismes. C. R. Acad. Sci. Paris 240 : 2457-2459.

Pattillo, W. H., & Becker, E. R. Cytochemistry of *Eimeria brunetti* and *E. acervulina* of the chicken. J. Morph. 96 : 61-95, figs.

Pattillo, W. H. see Becker, E. R.

Pautrizel, R., & Martrenchar, C. Influence de l'histamine et d'un antihistaminique de synthèse sur la résistance du rat au *Plasmodium berghei*. C. R. Soc. Biol., Paris 149 : 698-700.

Payne, F. see Brooke, M. M.

Peach, M. Soil fungi that prey on Protozoa. In Soil Zoology : Kevan, London 1955 : 302-310, figs.

Pecora, P., & Hirshfield, H. I. Studies of isolated *Blepharisma undulans* and *Blepharisma* fragments. J. Protozool. 2 Suppl. : 12

Pedder, A. E. see Ion, D. C.

Peirson, J. F. see Phleger, F. B.

Pelaez, D., & Streber, F. Estudios sobre Hematozoarios. V. *Trypanosoma serveti* nov. sp., parasito de un *Sceloporus* de Mexico. An. Esc. nac. Cienc. biol., Mexico 8 : 147-152, figs. [English summary.]

Pennak, R. W. Comparative limnology of eight Colorado mountain lakes. Univ. Colo. Stud. Biol. 2 : 1-75, figs.

Perebaskine, V. see Gubler, Y.

Pereira de Castro, M. Divisão multipla de *Toxoplasma* em cultura de tecidos. Arq. Inst. Biol., S. Paulo 22 : 233-241 figs. [Portuguese with English summary.]

Petersen, R. A. see Baker, H.

Petersen, R. A. see Nathan, H. A.

Petrovitch, Z. see Simitch, T.

Petrù, M., & Vojtěchovská, M. [Effect of barbiturate narcosis on course of experimental trypanosomiasis.] Čsl. Parasit. 2 : 105-156.

Petters, V. (1). Development of Upper Cretaceous foraminiferal faunas in Colombia. J. Paleont. 29 : 212-225, figs.

Petters, V. (2). News—Colombia. Micropaleontology 1 : 100-101.

Phelps, A. Aspects of the inheritance of thermophily in *Tetrahymena pyriformis*. J. Protozool. 2 Suppl. : 9.

Phillips, B. P., Wolfe, P. A., Rees, C. W., Gordon, H. A. Wright, W. H., & Reyniers, J. A. Studies on the ameba—bacteria relationship in amoebiasis. Comparative results of the intracecal inoculation of germfree monocontaminated, and conventional guinea pigs with *Entamoeba histolytica*. Amer. J. trop. Med. Hyg. 4 : 675-692 figs.

Phleger, F. B. Displaced foraminifera faunas. Spec. Publ. Soc. Econ. Pal. Min. 2 1951 : 66-107, figs.

Phleger, F. B., & Parker, F. L. Gulf of Mexico foraminifera. Fish. Bull. U.S. 55 1954 : 235-241.

Phleger, F. B., Parker, F. L., & Peirson, J. F. North Atlantic Foraminifera. Rep. Swedish Deep-Sea Exped. 1947-8. 7 1953 : 1-122, figs.

Piekarski, G., & Sibbing, W. *Pneumocystis carinii*: protozoal parasite causing interstitial pneumonia in infants. Trans. R. Soc. trop. Med. Hyg. 49 : 305.

Pifano, F., Medina, R., Medina Febres, M., & Romer, M. La leishmaniasis tegumentaria americana. Rev. Sanid. Asist. soc., Caracas 19 1954 : 403-423. [English summary.]

Pigón, A. (1). Permeability to water of active forms and cysts of *Actinosphaerium*. Bull. Acad. polon. Sci. 3 : 235-239, figs.

Pigon, A. (2). Respiration and respiratory enzymes in Infusoria. II. *Spirostomum minus* Roux, *Spirostomum intermedium* Kahl. *Folia biol.* Warszawa 3 : 229-265, figs.

Pigon, A., & Szarski, H. The velocity of the ciliary movement and the force of the ciliary beat in *Paramecium caudatum*. *Bull. Acad. polon. Sci. Cl. 2.* 3 : 99-102, figs.

Pilagalo, O. *see* Carvalhal, S.

Pishvanova, L. S. *see* Subbotina, N. N.

Pitelka, D. R., & Schooley, C. N. Comparative morphology of some protistan flagella. *Univ. Calif. Publs. Zool.* 61 : 79-128, figs.

Pizzi, T., & Diaz, M. Reaccion de Feulgen en *Trypanosoma cruzi*. Biologica, Santiago 20 1954 : 71-87.

Pizzi, T., & Knierim, F. Modificaciones del bazo en relacion con la tasa de anticuerpos circulantes en ratones experimentalmente infectados con *Trypanosoma cruzi*. *Bol. Chilen. Parasit.* 10 : 42-49. [English summary.]

Pizzi, T., & Rubio, M. Aspectos celulares de la inmunidad en la enfermedad de Chagas. *Bol. Chilen. Parasit.* 10 : 4-9 figs. [English summary.]

Pizzi, T. *see* Taliaferro, W. H.

Pokorny, B. Beitrag zur Kenntnis der Toxoplasmose des Feldwildes. *Čsl. Parasit.* 2 : 157-160, figs. [German summary.]

Pokorny, V. (1). The age of the clay-balls and origin of fauna in the Tortonian Sands at Zabčice (Moravia, Extra-Alpine Neogene Basin.). *Mém. Soc. Sci. Bohème* 8 1951 : 1-7, figs.

Pokorny, V. (2). [The Middle Devonian Foraminifera of Célechovice, Czechoslovakia.] *Mém. Soc. Sci. Bohème* 9 1951 : 1-29, figs. [English summary.]

Poljanskij, J. I. [Materials on the parasitology of fishes in the northern seas of U.S.S.R. Parasites of fishes in Barents sea. (Incl. protozoa.)] *Trav. Inst. zool. Acad. Sci. U.R.S.S.* 19 : 5-170 figs. [In Russian.]

Ponet, A. *see* Sergent, E.

Pontecorvo, G. Heredity and variation in micro-organisms. *Discovery* 16 : 518-522, figs.

Popov, P. P. *see* Zasuchin, D. N.

Porter, A. Summary of the report of the honorary parasitologist for the year 1954. *Proc. Zool. Soc. London* 125 : 541.

Porter, K. R. *see* Rudzinska, M. A.

Porter, K. R. *see* Sedar, A. W.

Portugal, O. P., Ramos, O. L., Carvalhal, S., Silva, T. L. da, Paladino, N., & Mafra, H. Inquerito clinico epidemiologico e serologico sobre a molestia de Chagas no municipio de Itaporanga, Estado de S. Paulo. *Folia clin., S. Paulo* 22 : 69-78. [English summary.]

Portugal, O. P. *see* Carvalhal, S.

Powers, E. L. Radiation effects in *Paramecium*. *Ann. N.Y. Acad. Sci.* 59 : 619-637, figs.

Powers, E. L., Ehret, C. F., & Roth, L. E. Mitochondrial structure in *Paramecium* as revealed by electron microscopy. *Biol. Bull., Woods Hole.* 108 : 182-195, figs.

Pozaryski, W. *see* Bielecka, W.

Pozner, V. M. [Stratigraphy of the Terrigen Horizon of the Lower Carboniferous of the Kama-Kinel Depression.] [Foraminifera.] *C. R. Acad. Sci. U.R.S.S.* 104 : 892-894. [In Russian.]

Prescott, D. M. *see* Mazia, D.

Price, D. L. *see* Herman, C. M.

Pringsheim, E. G. The genus *Polytomella*. *J. Protozool.* 2 : 137-145, figs.

Provasoli, L., & McLaughlin, J. J. A. Auxotrophy in some marine and brackish dinoflagellates. *J. Protozool.* 2 Suppl. : 10.

Puryear, J. R. *see* Albritton, C. C. jr.

Puytorac, P. de (1). Sur *Hovasiella polydorae* nov. gen., n. sp., cilié astome endoparasite de *Polydora giardi* Mesn. *Arch. Zool. exp. gén.* 93 (Notes et Rev.) : 20-34, figs.

Puytorac, P. de (2). Présence simultanée d'une Microsporidie, *Thelohania georgevitchi* sp. nov. dans les cellules intestinales de *Polydora giardi* M. et dans un Cilié parasite du tube digestif de ce même Polychète. *C. R. Acad. Sci., Paris* **240** : 925-927, figs.

Puytorac, P. de (3). A propos de deux nouvelles espèces de ciliés astomes : *Radiophrya intermedia* sp. nov. et *Juxtaradiophrya enchytraeoides* sp. nov. Cinétodesme et cytosquelle chez les astomes. *Bull. Soc. zool. Fr.* **80** : 92-100, fig.

Puytorac, P. de (4). Mise en évidence de "l'argyrome" chez une Monocystinae Stein et imprégnation spécifique de la striation superficielle des Grégaries, par certaines des techniques argentiques. *C. R. Acad. Sci., Paris* **240** : 2447-2449, figs.

Qadri, S. S. The morphology of *Trypanosoma striati* n. sp., from an Indian fresh-water fish. *Parasitology* **45** : 79-85, figs.

Quay, W. B. Trypanosomiasis in the Collared lemming, *Dicrostonyx torquatus* (Rodentia.) *J. Parasit.* **41** : 562-565.

Raadshoven, B. van. On some Paleocene and Eocene larger foraminifera of western Venezuela. *Proc. Third World Petr. Congr.* **1** 1951 : 476-489, figs.

Raffaele, G. Alcune osservazioni sulla vitalità degli sporozoiti. *Riv. Malariaol.* **34** : 215-226. [English summary.]

Rafienko, N. I. [On the Ordovician age of species in the region of the Kizik-Chadz settlement, Tubinsk autonomous province.] [Foraminifera.] *C. R. Acad. Sci. U.R.S.S.* **105** : 541-542. [In Russian.]

Raggatt, H. G. Occurrence of *Crespinina* at Johanna River, Victoria. *Aust. J. Sci.* **18** 1954 : 31-32.

Raggatt, H. G., & Crespin, I. (1). Geology of Tertiary rocks between Torquay and Eastern View, Victoria [Foraminifera.] *Aust. J. Sci.* **14** 1952 : 143-147, figs.

Raggatt, H. G., & Crespin, I. (2). Stratigraphy of Tertiary rocks between Torquay and Eastern View, Victoria. *Proc. roy. Soc. Victoria N.S.* **67** : 75-142, figs.

Rajkov, I. B. [Division and reorganizational processes in infusorian *Trachelocerca phoenicopterus* Cohn (Holotrichia.)]. *Zool. Ž.*, Moscow **34** : 747-759, figs. [In Russian.]

Rakovec, R. see Simitch, T.

Ramanujachari, G. see Alwar, V. S.

Rama Rao, L. *Orbitoides faujasi*—the first Orbitoid from the Cretaceous rocks of South India. *Curr. Sci.* **24** : 148-150.

Ramos, I. see Torrealba, J. F.

Ramos, O. see Carvalhal, S.

Ramos, O. L. see Portugal, O. P.

Ramovš, A. see Kochansky-Devidé, V.

Ramsfjell, E. see Gaarder, K. R.

Rao, S. R. N. News—India. *Micropaleontology*. **1** : 104-106.

Rauscher, F. J. see Groupé, V.

Rauzer-Chernoussova, D. M. [The Fusulinid zones and their relation to other stratigraphic subdivisions.] *Bull. Soc. Nat. Moscow geol.* **30** : 67-70. [In Russian.]

Rauzer-Chernoussova, D. M., & Rozovskaya, S. E. [Systematics and phylogeny of the Fusulinidae.] *Bull. Soc. Nat. Moscow geol.* **30** : 99-100. [In Russian.]

Ray, H. N. Tissue phase of *Plasmodium semnopitheci* Knowles, in the hunuman *Semnopithecus entellus*. *Proc. Indian sci. Congr.* **38(3)** [1952.] 209.

Ray, H. N., Das Gupta, N. N., De, M. L., & Guha, A. A new structure observed in *Trypanosoma evansi* (Indian strain.) *Nature, Lond.* **175** : 392-393, figs.

Ray, H. N., & Shivnani, G. A. *Entamoeba* sp. in the intestines of the hunuman, *Semnopithecus entellus*. *Proc. Indian sci. Congr.* **38 (3)** [1952] : 209.

Ray, H. N. see Sen, H. G.

Ray, H. N. see Sen Gupta, P. C.

Ray, S. M., & Chandler, A. C. *Dermocystidium marinum*, a parasite of oysters. *Exper. Parasit.* 4 : 172-200, figs.

Read, C. P. Comparative studies on the physiology of Trichomonad flagellates. *J. Parasit.* 41 Suppl. : 16.

Read, C. P., & Chang, P. Cytochemical observations on cultured macrophages infected with *Leishmania donovani*. *J. Parasit.* 41 Suppl. 21.

Read, C. P., & Rothman, A. H. Preliminary notes on the metabolism of *Trichomonas vaginalis*. *Amer. J. Hyg.* 61 : 249-260, figs.

Redichkin, N. A. [On the stratigraphy of the Middle Carboniferous of the south-eastern part of the Great Donbas.] [Foraminifera.] *C. R. Acad. Sci. U.R.S.S.* 103 : 483-486. [In Russian.]

Redichkin, N. A. see Bankovski, V. A.

Redmond, C. D. (1). A new *Siphogenerinoides* from the Coniacian of Colombia. *Micropaleontology* 1 : 247-249, figs.

Redmond, C. D. (2). News—Saudi Arabia. *Micropaleontology* 1 : 296.

Rees, C. W. Problems in amoebiasis. Springfield, U.S.A.—Oxford : x+119 pp. figs.

Rees, C. W. see Phillips, B. P.

Reeside, J. B. jr. see Cobban, W. A

Reich, K. The effect of cyanide and azide on the respiration of the amoeba *Mayorella palestinensis*. *Physiol. Zool.* 28 : 145-151.

Reich, K., & Kahn, J. A bacteria-free culture of *Prymnesium parvum* (Chrysomonadina.) *Bull. res. Counc. Israel* 4 1954 : 144-149.

Reichel, M. Les caractères embryonnaires de *Subalveolina*. *Ecl. geol. helv.* 46 1953 : 256-262, figs.

Reichenbach-Klinke, H. H. (1) Untersuchungen über die bei Fischen durch Parasiten hervorgerufenen Zysten und deren Wirkung auf den Wirtskörper. Teil I. [Incl. protozoa.] *Z. Fisch.* 3 1954 : 565-636, figs.

Reichenbach-Klinke, H. H. (2) Untersuchungen über die bei Fischen durch Parasiten hervorgerufenen Zysten und deren Wirkung auf den Wirtskörper. Teil II. [Incl. protozoa] *Z. Fisch.* 4 : 1-52 figs.

Reinertson, J. W. see Thompson, P. E.

Reis, J., & Nobrega, P. An analysis of 17,753 cases of avian diseases in São Paulo. [Incl. protozoa] *Arq. Inst. biol., S. Paulo* 22: 119-160 [Portuguese with English summary.]

Reisner, A. A method of obtaining specific serotype mutants in *Paramecium aurelia* stock 169, var. 4. *Genetics* 40 : 591-592.

Reiss, Z. (1). News—Israel. *Micropaleontology* 1 : 386.

Reiss, Z. (2). Micropaleontology and the Cretaceous-Tertiary boundary in Israel. *Bull. res. Counc. Israel* 5B : 105-120.

Rendtorff, R. C. Toxoplasmosis. *Rec. Columbia med. Soc.*, Sept. 1955 : 6 pp.

Rendtorff, R. C., & Holt, C. J. The experimental transmission of human intestinal protozoan parasites. V. Multiple infections produced with three species of amebae. *Amer. J. Hyg.* 61 : 321-325, fig.

Rendtorff, R. C. see Jeffery, G. M.

Renz, H. H. Some upper Cretaceous and lower Tertiary foraminifera from Aragua and Guárico, Venezuela. *Micropaleontology* 1 : 52-71, figs.

Reshetnyak, V. V. (1). [New species of Radiolaria in the Okhotsk Sea.] *Trav. Inst. zool. Acad. Sci. U.R.S.S.* 13 1953 : 33-37, figs. [in Russian.]

Reshetnyak, V. V. (2). [New species of gigantic Radiolaria from the Bering Straits, belonging to the genus *Cytocladus*.] *Trav. Inst. zool. Acad. Sci. U.R.S.S.* 18 : 10-12, figs. [In Russian.]

Reusse, U. Zur Frage der Zystenbildung und des Lebenszyklus bei Trichomonaden unter besonderer Berücksichtigung von *Trichomonas foetus* und *Trichomonas muris*. *Z. Tropenmed. Parasit.* 6 : 348-361, fig. [English summary.]

Rey, M. News—North Africa. *Micropaleontology*. **1** : 294–296.

Reyniers, J. A. *see* Phillips, B. P.

Reynoldson, T. B. Factors influencing population fluctuations of *Urceolaria mitra* (Peritricha) epizoic on freshwater triclad. *J. Anim. Ecol.* **24** : 57–83, figs.

Ricciardi, M. L. *see* Buonomini, G.

Richmond, J. Geology of Burruel Ridge, northwestern Santa Ana Mountains, California. [Foraminifera] *Calif. Dept. Nat. Res. Div. Mines Sp. Rept.* **21** 1952 : 1–16.

Riedel, W. R. Mesozoic and late Tertiary radiolaria of Rotti. *J. Paleont.* **27** (6) 1953 : 805–813, figs.

Riedl, R. J. M. Über die Isolation der lebenden Mikrofauna aus marinen Schlammböden. *Zool. Anz.* **155** : 263–275, figs.

Rigdon, R. H., & Hendricks, J. W. Myxosporidia in fish in waters emptying into Gulf of Mexico. *J. Parasit.* **41** : 511–518 figs.

Rinehart, R. E., & Marcus, H. Incidence of amebiasis in healthy individuals, clinic patients and those with rheumatoid arthritis. *Northwest Med.* **54** : 708–712.

Ringuelet, R. A. Protozoos Folliculinidos y esponjas perforantes en consorcios con la ostra comestible Argentina (*Ostrea puelchana* d'Orb.). *Notas Mus. E. Peron.* **18** : 175–190, figs.

Ritchie, L. S. *see* Wykoff, D. E.

Rittenberg, S. C. *see* Emery, K. O.

Ritterson, A. L. Studies on leishmaniasis in the Golden hamster. *J. Parasit.* **41** : 603–612 figs.

Rivola, E. *see* Languillon, J.

Robertson, J. F. *see* Albers, J. P.

Robinson, E. M. Diseases transmissible from animals to man. The present position. [Incl. Haemoflagellates.] *Pamphl. S. Afr. biol. Soc. No. 17* : 29–39.

Roch, E. *see* Varela, G.

Rocha, A. T. News—Portugal Overseas. *Micropaleontology*. **1** 1955: 386–387.

Rocha, A. T., & Ferreira, J. M. Estudo dos foraminíferos fósseis do Pliocénico da região de Pombal. *Rev. Fac. Cienc. Lisbon* (2C) **3** 1953 : 129–156, figs.

Rod, E., & Maync, W. Revision of lower Cretaceous stratigraphy of Venezuela. *Bull. Amer. Ass. Petrol. Geol.* **38** 1954 : 193–283.

Rodhain, J. Contribution à l'étude de *Plasmodium schwetzi*, E. Brumpt. (1re note.). *Ann. Soc. Belge Méd. trop.* **35** : 69–72, figs.

Rodhain, J., & Dellaert, R. (1). Contribution à l'étude de *Plasmodium schwetzi* E. Brumpt. (2me note.). Transmission du *Plasmodium schwetzi* à l'homme. (Note préliminaire.) *Ann. Soc. Belge Méd. trop.* **35** : 73–76.

Rodhain, J., & Dellaert, R. (2). Contribution à l'étude du *Pl. schwetzi*. E. Brumpt. (3me note.) L'infection à *Plasmodium schwetzi* chez l'homme. *Ann. Soc. Belge Méd. trop.* **35** : 757–775.

Rodhain, J., Wanson, M., & Vincke, I. (1). Nouveaux essais d'évolution de *Plasmodium berghei* Vincke et Lips chez diverses espèces d'anophèles. *Ann. Soc. Belge Méd. trop.* **35** : 203–217.

Rodhain, J., Wanson, M., & Vincke, I. (2). Essai de transmission cyclique de *Plasmodium berghei*. *Ann. Soc. Belge Méd. trop.* **35** : 219–224.

Rodriguez, A. *see* Morini, E. G.

Rodriguez, E. *see* Baker, H.

Rodriguez, E. *see* Nathan, H. A.

Roger, A. *see* Roger, F.

Roger, F., & Giroud, P. Quelques enseignements de la culture du toxoplasme effectuée dans le poumon de la souris. *Bull. Soc. Path. exot.* **48** : 298–302.

Roger, F., Giroud, P., & Roger, A. Remarques importantes sur la fixation du complément dans la toxoplasmose humaine ou expérimentale. Supériorité de l'antigène pulmonaire souris sur les antigènes : péritonéal souris, pulmonaire lapin ou chorio-allantoidien. *Bull. Soc. Path. exot.* **48** : 807–810.

Rogozza, M. L. *see* Markov, G. S.

Rollo, I. M. Resistance of *Plasmodium falciparum* to pyrimethamine. Trans. R. Soc. trop. Med. Hyg. **49** : 94-95.

Romaña, C. (1). Falta de transmision hereditaria de *Trypanosoma (Schizotrypanum) cruzi* en *Didelphis paraguayense* y comentario sobre herencia del parásito en otros mamíferos. An. Inst. Med. reg., Tucuman **4** : 149-154 figs. [French summary.]

Romaña, C. (2). Acerca del ciclo evolutivo del *Trypanosoma (Schizotrypanum) cruzi* Chagas 1909, en sus faces tisular y hematíca. An. Inst. Med. reg. Tucuman **4** : 155-171 figs. [English summary.]

Romaña, C. see Romaña, M. S. de

Romaña, M. S. de & Romaña, C. Valor comparativo del examen a fresco, de la gota gruesa y del xenodiagnóstico en la identificación de los casos agudas de enfermedad de Chagas. An. Inst. Med. reg., Tucuman **4** : 181-184. [French summary.]

Romer, M. see Pifano, F.

Ronai, P. H. Brackish-water foraminifera of the New York Bight. Contr. Cush. Fdn. **6** : 140-149, figs.

Rosenberg, G. Einige Beobachtungen im Nordteil der Weyerer Struktur (Nördliche Kalkalpen und Klippenzonen.) [Foraminifera.] S.B. öst. Akad. Wiss. Abt. I. **164** : 145-161, fig.

Rosset, J. see Donze, P.

Roth, L. E. An electron histological study of locomotor organelles in *Euplates patella*. J. Protozool. **2** Suppl. : 7.

Roth, L. E. see Powers, E. L.

Roth, W. J. S. The effect of Co++ and Ni++ on *Tetrahymena pyriformis*. J. Protozool. **2** Suppl. : 12.

Rothman, A. H. see Read, C. P.

Rottgardt, D. Über die Verteilung mikropaläontologisch wichtiger Bestandteile in rezenten brackischen Sedimenten der westlichen Ostsee (Kieler Bucht.) Paläont. Zeit. **25** 1952 : 117.

Roubaud, E. Les précurseurs dans la lutte contre la maladie du sommeil en Afrique Noire Française (1908-1930). Presse Médicale **63** (75) : 1547-1548.

Roubaud, E. see Bouet, G.

Roubaud, E. see Vaucel, M.

Rouiller, C. see Fauré-Fremiet, E.

Routh, C. F., McCroan, J. E., & Hames, C. G. Three cases of human infection with *Isospora* in Georgia. Amer. J. trop. Med. Hyg. **4** : 1-8.

Rowe, M. B. see Balamuth, W.

Rozovskaya, S. E. see Rauser-Chernoussova, D. M.

Rubio, M. Estudio de los factores que intervienen en la virulencia de una cepa de *Trypanosoma cruzi*.— Acción de la cortisona en la capacidad de invasión y multiplicación del parásito. Biológica, Santiago **20** 1954 : 89-125, figs. [English summary.]

Rubio, M. see Pizzi, T.

Rudzinska, M. A. A simple method for paraffin and plastic embedding of protozoa. J. Protozool. **2** : 188-190, figs.

Rudzinska, M. A. & Porter, K. R. (1). Observations on the fine structure of the macronucleus of *Tokophrya infusorium*. J. biophys. biochem. Cytol. **1** : 421-428, figs.

Rudzinska, M. A., & Porter, K. R. (2). The structure and behavior of the macronucleus in *Tokophrya infusorium* as revealed by light and electron microscopy. J. Protozool. **2** Suppl. : 5.

Rühmann, D. Von den freischwebenden Grünalgen des Süßwassers. Aquar. Terrar. Z. **8** : 125-126, figs.

Ruffié, J. see Bouisset, L.

Russo, A. (1). Ulteriori notizie sul potere germinativo del soma nei Metazoi e su le sue manifestazioni in relazione al ciclo biologico di un ciliato (*Cryptochilum echini* Mps.). Atti Accad. Gioenia (6) **7** 1951 : 11-22, figs. [English summary.]

Russo, A. (2). Identità di fenomeni sessuali nei metazoi in una protozoo (*Cryptochilum echini* Mps.). Atti Accad. Gioenia (6) **8** 1953 : 31-42, figs. [English summary.]

Russo, A. (3). Alcuni risultati di studi biologici nel periodo 1892-1952. Atti Accad. Gioenia (6) **9** 1954 : 1-11.

Ryan, F. J. Attempt to reproduce some of Moewus' experiments on *Chlamydomonas* and *Polytoma*. Science **122** : 470.

Rybicka, Z. Investigations on Flagellata of the genus *Bodo* Stein, parasitising in man. Acta parasit. Polon. **3** : 61-75, figs. [Polish with English summary.]

Ryley, J. F. (1). Studies on the metabolism of the Protozoa. 4. Metabolism of the parasitic flagellate *Strigomonas oncopelti*. Biochem. J. **59** : 353-361, figs.

Ryley, J. F. (2). Studies on the metabolism of the Protozoa. 5. Metabolism of the parasitic flagellate *Trichomonas foetus*. Biochem. J. **59** : 361-369, figs.

Ryley, J. F. see Manners, D. J.

Ryšavy, B. Přispěvek k poznání kokcidii našich i dovezených obratlovců. Čsl. Parasit. **1** 1954 : 131-174, figs. [Czech with Russian summary.]

Saavedra, J. see Coutts, W. E.

Sachlan, M. Notes on parasites of freshwater fishes in Indonesia. Contr. Inl. Fish. Res. Sta. Djakarta-Bogor. No. **2** 1952 : 1-59, figs.

Sachs, I. B. Nuclear changes in the cyst of *Pelomyxa illinoiensis*. J. Protozool. **2** Suppl. : 1.

Safonova, T. P. see Larionova, E. N.

Sahni, M. R. Recent researches in the palaeontologic division, Geological Survey of India. Curr. Sci. **24** : 187-188.

Sahni, M. R., & Sastri, V. V. New microforaminifera from the *Orbitolina*-bearing rocks of Tibet and Burma. Curr. Sci. **23** 1954 : 384-386, figs.

Said, R. (1). Foraminifera from some 'Pliocene' rocks of Egypt. J. Wash. Acad. Sci. **45** : 8-13.

Said, R. (2). News—Egypt. Micro-paleontology **1** : 102-103.

Saleem, M. Two new genera of Hypermastigote flagellates from the termite, *Archotermopsis wroughtoni* (Desneux.) Biologia, Lahore **1** : 34-39, figs.

Saltman, P. D. see Wirtschafter, S. K.

Samojlovič, O. A. [Materials on parasitocoenoses of rats in Orel. (Incl. protozoa.)]. Zool. Ž., Moscow **34** : 518-521. [In Russian.]

Samuels, R. Mitosis of *Trichomonas prowazekii*. J. Protozool. **2** Suppl. : 3-4.

Sanborn, W. R. Microagglutination reactions of *Trichomonas suis*, *T. sp.*, and *T. foetus*. J. Parasit. **41** : 295-298.

Sander, N. J. An apparatus for photographing foraminifera and other small objects. Micropaleontology **1** : 251-256, figs.

Sannemann, D. Hystrichosphaerideen aus dem Gotlandium und Mittel-Devon des Frankenwaldes und ihr Feinbau. Senckenbergiana Lethaea **36** : 321-346, figs.

Sappenfield, R. see Brooke, M. M.

Sarkisjan, M. A. [Incidence of amoebiasis and of carriers of *Entamoeba histolytica* in an endemic focus.] Med. Parasitol. paras. Dis., Moscow **24** (4) : 311-316. [In Russian.]

Sastri, V. V. see Sahni, M. R.

Sato, T. see Tamura, M.

Saudray, Y. see Lafon, M.

Saunders, D. C. The occurrence of *Haemogregarina bigemina* Laveran and Mesnil and *H. acheri* n. sp. in marine fish from Florida. J. Parasit. **41** : 171-176, figs.

Saurin, E. (1). Les Fusulinides des calcaires de Ky-Lua Langson (Tonkin.) Bull. serv. Géol. Indochine **29** 1950 : 1-32, figs.

Saurin, E. (2). Sur quelques points de la stratigraphie et de la structure de l'Anthracolithique dans la zone maritime du Nord Vietnam. [Foraminifera.] C. R. Acad. Sci., Paris **235** 1952 : 1667-1669.

Sautet, J., & Caporali, J. Influence chez la souris blanche de divers régimes sur l'évolution de *Plasmodium berghei*. Méd. trop., Marseilles 15 : 222-228.

Sawada, T. see Hara, K.

Sawyer, F. C. Books of reference in zoology, chiefly bibliographical. J. Soc. Bibl. nat. Hist. 3 : 72-91.

Saxe, L. H. Observations on *Eimeria* from *Ambystoma tigrinum*, with descriptions of four new species. Proc. Iowa Acad. Sci. 62 : 663-673, figs.

Saxe, L. H. see Anderson, E.

Schell, W. W. see Albritton, C. C. jr.

Schensnovich, V. B. [Pathogenicity of strains of *Entamoeba histolytica* recovered from healthy carriers.] Med. Parasitol. paras. Dis. Moscow 24(4): 317-321 [In Russian.]

Schijfsma, E. La position stratigraphique de *Globotruncana helvetica* Bolli en Tunisie. Micropaleontology 1 : 321-334, figs.

Schildt, C. S. & Herrick, C. A. The effect of cecal coccidiosis on the motility of the digestive tract of the domestic fowl. J. Parasit. 41 Suppl. : 18-19.

Schindevolf, O. H. Über die möglichen Ursachen der grossen erdgeschichtlichen Faunenschritte. [Foraminifera.] N. Jb. Geol. Paläont. B. 10 1954 : 457-465, figs.

Schipper, A. L. see Donovan, A. J.

Schloegel, E. L. see Blagg, W.

Schmidt, D. see Leiner, M.

Schmidt, G. Stratigraphie und Mikrofauna des mittleren Malm in nordwest-deutschen Bergland mit einer Kartierung am Südlichen Ith. Abh. senckenb. naturf. Ges. 491 : 1-76, figs.

Schmidt, H. Die Frage der Brackwasserfaunen im Karbon. C. R. 3rd Congr. Avanc. Etudes Strat. et Géol. Carbonifère, Heerlen 1951. 1952 : 2 : 551-554.

Schmidt, R. A. M. Microradiography of microfossils with X-ray diffraction equipment. Science 115 1952 : 94-95.

Schmidt-Hoensdorf, F., & Holz, J. Über die Toxoplasmose der weissen Ratte. Z. Hyg. InfektKr. 139 1954 : 338-340, figs.

Schmidtke, L. (1). Zur Frage der Dauerausscheidung bei Toxoplasmose. Zbl. Bakt. (I. Orig.) 164 : 132-133.

Schmidtke, L. (2). Histologische Untersuchungen an toxoplasmainfizierten Insekten (*Calliphora erythrocephala*, *Periplaneta americana*.) Zbl. Bakt. (I. Orig.) 164 : 508-513. [English summary.]

Schneider, J., & Hartmann, L. Paludisme et réaction de Henry. La réaction de Henry dans le diagnostic du paludisme. Bull. Soc. Path. exot. 48 : 552-564.

Schneller, M. see Sonnenborn, T. M.

Schoenborn, H. W., & Gibson, R. J. Growth characteristics of *Astasia longa* clones derived from irradiated cells. J. Protozool. 2 Suppl. : 2.

Scholtyseck, E. (1). *Eimeria anatis* n. sp., ein neues Coccid aus der Stockente (*Anas platyrhynchos*). Arch. Protistenk. 100 : 431-434 figs.

Scholtyseck, E. (2). Therapiever suchen und histologische Untersuchungen zur Geflügelcoccidiose. I. Teil: Über die Anwendung des Sulfonamidgemisches "Protocid" (Schering) zur Bekämpfung der Geflügel Coccidiose. Zbl. Bakt. Abt. I. Orig. 163 : 410-424.

Schooley, C. N. see Pitelka, D. R.

Schott, W. (1). Die flächenhafte Verteilung der Meeressedimente im Atlantischen Ozean. [Foraminifera.] Deuts. hydro. Zeits. 3 1950 : 89-93.

Schott, W. (2). On the sequence of deposits in the equatorial Atlantic Ocean. [Foraminifera.] Medd. Oceanogr. Inst. Göteborg 18 (B) (6) (2) 1952 : 1-15, figs.

Schott, W. (3). Zur Klimaschichtung der Tiefseesedimente im äquatorialen Atlantischen Ozean. [Foraminifera.] Geol. Rundschau 40 1952 : 20-31, figs.

Schulz, O. Neue Beiträge zur Geologie der Gosau-Schichten des Brandenberger Tales (Tirol). [Foraminifera.] N. Jahrb. Geol. Paläont. 95 1952 : 1-98.

Schwab-Bonaventure, N. Sur l'action de substances chimiques inversant le signe du galvanotropisme des Paraméries. C. R. Soc. Biol., Paris 149 : 395-398.

Schwartz, H. S. see Hanson, R. W.

Schweighauser, J. Mikropaläontologische und stratigraphische Untersuchungen im Paleocaen und Eocaen des Vicentin (Norditalien). Schweiz. palaeont. Abh. 70 1953 : 1-97, figs.

Scorza, J. V., & Dagert, C. *Trypanosoma mega* Dutton & Todd, 1903 y *Trypanosoma rotatorium* Mayer, 1843 en batracios y una nueva especie en un saurio de Venezuela. Bol. Soc. Venezol. Cienc. nat. 16 : 205-208. [English summary.]

Scorza, J. V., & Montiel, B. O. N. Estudio experimental sobre la sucesión de protozoarios que se desarrolla en las infusiones de musgo y de las variaciones de pH que la acompañan. Acta Biol. venezuel. 1 1954 : 213-230, figs.

Seaman, G. R. Reversible cleavage of succinate by protozoan extracts. J. Protozool. 2 Suppl. : 1.

Sebestyén, O. [Quantitative plankton studies in Lake Balaton. III. The biomass of the pelagic dinoflagellatae.] Ann. Inst. Biol. Tihany 22 1954 : 185-197, figs. [English summary.]

Sedar, A. W., & Porter, K. R. The fine structure of cortical components of *Paramecium multimicronucleatum*. J. biophys. biochem. Cytol. 1 : 583-604 figs.

Seibold, H. R., & Thorson, R. E. (1). *Klossiella equi* n. sp. (Protozoa: Klossiellidae) from the kidney of an American Jack. J. Parasit. 41 : 285-288, figs.

Seibold, H. R., & Thorson, R. E. (2). *Klossiella equi*: correction. J. Parasit. 41 : 643.

Semikhatova, S. V. [Namurian and its importance in the stratigraphy of the U.S.S.R. Carboniferous.] [Foraminifera.] Bull. Soc. Nat. Moscow geol. 30 : 75-104. [In Russian.]

Semikhatova, S. V., & Menyaïlenko, P. A. [Lithological and paleontological features of the deposits between the Devonian and Carboniferous in the southern part of the Dono-Medveditz Plateau.] C. R. Acad. Sci. URSS 102 : 805-808, fig. [In Russian.]

Sen, H. G., Dutta, B. N., & Ray, H. N. (1). Effect of starvation on the course of experimentally induced *Trypanosoma evansi* infection in rats. Indian J. vet. Sci. Husb. 25 : 143-148, fig.

Sen, H. G., Dutta, B. N., & Ray, H. N. (2). Milk diet in *Trypanosoma evansi* infection in rats. Indian J. vet. Sci. Husb. 25 : 117-120.

Seneca, H., & Ides, D. The effect of oxysteroids on *Trypanosoma cruzi* infection in mice. Amer. J. trop. Med. Hyg. 4 : 833-836.

Seneca, H., & Wolf, A. *Trypanosoma cruzi* infection in the Indian monkey. Amer. J. trop. Med. Hyg. 4 : 1009-1014.

Sen Gupta, P. C., & Ray, H. N. A cytochemical study of *Balantidium coli* Malmsten 1857. Proc. zool. Soc. Calcutta 8 : 103-110, figs.

Sen Gupta, P. C., Ray, H. N., Dutta, B. N., & Chaudhuri, R. N. A cytochemical study of *Plasmodium berghei* Vincke and Lips, 1948. Ann. trop. Med. Parasit. 49 : 273-277.

Serafim, E. see Aragão, J. M. B. de

Sergent, E. (1). Observations d'infection latente d'emblée, avec pré-munition corrélative, dans le paludisme expérimental à *Plasmodium berghei* du rat blanc. C. R. Acad. Sci., Paris 239 1954 : 524-525.

Sergent, E. (2). Émile Maupas, prince des protozoologues. Arch. Inst. Pasteur Algér. 33 : 59-70, figs.

Sergent, E. (3). La prémunition antipaludique et les accès de pré-munis. Arch. Inst. Pasteur Algér. 33 : 307-309.

Sergent, E. (4). De l'utilité des traverses dans la recherche scientifique. [History of protozoology.] Refuah Veterinarith, Tel-Aviv **12**: 291-283. [In Hebrew and French.]

Sergent, E., & Poncet, A. (1). Étude expérimentale du paludisme des rongeurs à *Plasmodium berghei*. I. Incubation, accès aigu. Arch. Inst. Pasteur Algér. **33**: 71-77.

Sergent, E., & Poncet, A. (2). Étude expérimentale du paludisme des rongeurs à *Plasmodium berghei*. II. Stade d'infection patente métacritique. Arch. Inst. Pasteur Algér. **33**: 195-222.

Sergent, E., & Poncet, A. (3). Étude expérimentale du paludisme des rongeurs à *Plasmodium berghei*. III. Résistance innée. Arch. Inst. Pasteur Algér. **33**: 287-305.

Seshachar, B. R., & Dass, C. M. S Photometric study of desoxyribonucleic acid (DNA) synthesis in regenerating macronucleus of *Epi-styliis articulata* From. Proc. nat. Inst. Sci. India **20** 1954 : 656-659.

Shardanov, A. N. see Khain, V. E.

Shchedrina, Z. G. [Two new species of Foraminifera belonging to the family Trochamminidae.] Trav. Inst. zool. Acad. Sci. U.R.S.S. **18**: 5-9, figs. [In Russian.]

Sheng, C. C. see Yen, T. P.

Shields, J. A. see Moore, E. L.

Shikanuma, S. *Triticites* zone at Sakamototage, Gifu Prefecture. J. geol. Soc. Japan **57** 1951 : 2266.

Shinogi, M. see Fukuda, S.

Shivnani, G. A. see Ray, H. N.

Shute, P. G. The discovery of the third cycle in the life history of the human malaria parasite. King's Coll. Hosp. Gaz. **34** : 234-242.

Shute, P. G., & Maryon, M. (1). Transmission of *Plasmodium malarial* by laboratory-bred *Anopheles maculipennis* var. *atroparvus* Meigen. Ann. trop. Med. Parasit. **49** : 451-454.

Shute, P. G., & Maryon, M. (2). I. *Haemoproteus* in English wood pigeon. III. An improved method of staining thin and thick blood films with Giemsa stain. IV. A series of blood films showing human malaria parasites which by their position in relation to the host cells, suggests that the parasites are on, and not in, the cells. Trans. R. Soc. trop. Med. Hyg. **49** : 306-307.

Sibbing, W. see Pieckarski, G.

Sigal, J. (1). Aperçu stratigraphique sur la micropaléontologie du Crétacé [Foraminifera.] 19th. Congr. Géol. Internat., Algér., Monogr. Région (1) Algérie **26** 1952 : 1-47.

Sigal, J. (2). Foraminifera : in Lefranc, J. P., Des couches à bois fossiles tertiaires du Tinrhert occidental et de Bel Guebbour (Sahara central.) C. R. Soc. géol. Fr. **1952** : 253-254.

Sigal, J. (3). Observations sur l'âge Cénomanien d'une microfaune décrite de la région de Taza (Maroc). C. R. Soc. géol. Fr. **1952** : 309-311.

Sigal, J. see Cheylan, G.

Sigal, J. see Delga, M. D.

Sigal, J. see Ellenberger, F.

Sigal, J. see Hilly, J.

Sigal, J. see Magné, J.

Silva, I. I. Acerca de la acción tripanolítica de las sangres sobre los cultivos de *Trypanosoma (S.) cruzi* y observaciones sobre el desarrollo del mismo en un nuevo medio de cultivo. Inst. Med. reg., Tucuman, Monogr. No. 3, Publ. No. **706** : 69 pp. figs. [English summary.]

Silva, R. see Neghme, A.

Silva, T. L. da see Carvalhal, S.

Silva, T. L. da see Portugal, O. P.

Silva-Inzunza, E. see Coutts, W. E.

Simitch, T., & Petrovitch, Z. La faune des parasites intestinaux en Yougoslavie. I. La faune des protozoaires intestinaux chez les enfants d'âge scolaire. Arch. Inst. Pasteur Algér. **33** : 84-89.

Simitch, T., Petrovitch, Z., & Chibalitch, D. Choix des milieux de culture pour l'isolement et l'entretien d'*Entamoeba dysenteriae* *in vitro*. Arch. Inst. Pasteur Algér. 33 : 250-257.

Simitch, T., Petrovitch, Z., & Rakovec, R. Les espèces de *Babesia* du bœuf d'Europe. Arch. Inst. Pasteur Algér. 33 : 310-314, figs.

Simmons, J. S., & Gentzkow, C. J. (ed.) Medical and public health laboratory methods. London : 1191 pp [Incl. protozoology.]

Simpson, I. M. The Lower Carboniferous stratigraphy of the Omagh Syncline, Northern Ireland. [Foraminifera.] Quart. J. geol. Soc. Lond. 110 [1954] : 391-408, figs.

Singer, I., Hadfield, R., & Lakonen, M. The influence of age on the intensity of infection with *Plasmodium berghei* in the rat. J. inf. Dis. 97 : 15-21.

Singh, B. N. Culturing soil Protozoa and estimating their numbers in soil. In: Soil Zoology. Kevan. London. : 403-411, figs.

Singh, S. On the Laki beds in Dhampur Subathu region, Simla Hills [Foraminifera.] Curr. Sci. 21 1952 : 335-336.

Sinton, J. A. (1). Some lacunae in our knowledge of the malaria parasite. Indian J. Malar. 9 : 229-245, figs.

Sinton, J. A. (2). Morphology of the parasitized erythrocyte in infections with *Plasmodium ovale*. Trans. R. Soc. trop. Med. Hyg. 49 : 286-287.

Skinner, J. W., & Wilde, G. L. New fusulinids from the Permian of west Texas. J. Paleont. 29 : 927-940, figs.

Skreb, Y. see Blanc-Brude, R.

Skreb, Y. see Dragesco, J.

Slater, J. V. Some observations on the cultivation and sterilization of protozoa. Trans. Amer. micr. Soc. 74 : 80-85.

Slavin, D. *Cryptosporidium meleagridis* (sp. nov.) J. comp. Path. 65 : 262-266, figs.

Slavin, D. see Wilson, J. E.

Slinger, F. C. see Kent, P. E.

Sloane, N. H. see Stokstad, E. L. R.

Smet, R. M. de Variations du rapport protéines totales globulines du sérum lors de l'infection par *Plasmodium berghei*. Bull. Soc. Path. exot. 48 : 385-389.

Smet, R. M. de & Lips, M. Un nouveau babesia du Katanga, Congo Belge : *Babesia vanhoofi*. Ann. Soc. belge Méd. trop. 35 : 5-8, figs.

Smith, B. F. The effect of cysteine on growth of *Trichomonas vaginalis*. J. Parasit. 41 Suppl. : 16.

Smith, F. D. jr. Planktonic foraminifera as indicators of depositional environment. Micropaleontology 1 : 147-151, figs.

Smith, J. E. The Cretaceous limestone producing areas of the Mara and Maracaibo District, Venezuela [Foraminifera.] Proc. Third World Pet. Cong. 1 1951 : 56-72, figs.

Smith, P. A. J. Long incubation period in leishmaniasis. Brit. med. J. 2 : 1143.

Smout, A. H. (1). Lower Tertiary foraminifera of the Qatar Peninsula. Brit. Mus. (Nat. Hist.) 1954 : 1-96, figs.

Smout, A. H. (2). Reclassification of the Rotaliidea (Foraminifera) and two new Cretaceous forms resembling *Elphidium*. J. Wash. Acad. Sci. 45 : 201-210.

Smout, A. H. see Eames, F. E.

Soares, R. de R. L. see Muniz, J.

Sobotka, H. see Baker, H.

Solovyeva, M. N. (1). [On the stratigraphy of the Upper Palaeozoic of Kizil-Kurnov.] [Foraminifera.] C. R. Acad. Sci. U.R.S.S. 100 : 545-546. [In Russian.]

Solovyeva, M. N. (2). [The structure of the wall in the Fusulinidae and its systematic significance.] C. R. Acad. Sci. U.R.S.S. 101 : 163-164, figs. [In Russian.]

Solovyeva, M. N. (3). [New genus of fusulinids—*Dagmarella*—and its systematic position and geographical distribution.] C. R. Acad. Sci. URSS **101**: 945–946, fig. [In Russian.]

Soltys, M. A. Studies on resistance to *Trypanosoma congolense* developed by zebu cattle treated prophylactically with antryicide pro-salt in an enzootic area of East Africa. Ann. trop. Med. Parasit. **49**: 1–8.

Soltys, M. A. see Gordon, R. M.

Sonneborn, T. M. (1). Macro-nuclear control of the initiation of meiosis and conjugation in *Paramecium aurelia*. J. Protozool. **2** Suppl. 12–13.

Sonneborn, T. M. (2). A third point of attachment between conjugants in *Paramecium aurelia* and its significance. J. Protozool. **2** Suppl. 13.

Sonneborn, T. M. (3). Heredity, development and evolution in *Paramecium*. Nature, London **175**: 1100–1102.

Sonneborn, T. M., & Schneller, M. (1) The basis of aging in variety 4 of *Paramecium aurelia*. J. Protozool. **2** Suppl.: 6.

Sonneborn, T. M., & Schneller, M. (2) Are there cumulative effects of parental age transmissible through sexual reproduction in variety 4 of *Paramecium aurelia*? J. Protozool. **2** Suppl.: 6–7.

Sonneborn, T. M., & Schneller, M. V. (3) Genetic consequences of aging in variety 4 of *Paramecium aurelia*. Genetics **40**: 596 (abstract).

Soubihe, N. V. see Uvo, D.

Sousa, J. de see Lobo, A. G. S.

Sparck, J. [Recent investigations in the heredity of the unicellular form, *Paramecium aurelia*.] Nat. Verd. Kbh **37** 1953: 88–105, figs.

Spooner, D. F. see Fulton, J. D.

Sprague, V. Protozoa of the Gulf of Mexico. Fish. Bull. U.S. **55** 1954: 243–256.

Sprague, V., & Orr, P. E. jr. *Nematopsis ostrearium* and *N. pyrtherchi* (Eugregarinina : Porosporidae) with special reference to the host-parasite relations. J. Parasit. **41**: 89–104.

Stainforth, R. M. The basis of Paleogene correlation of middle America. [Foraminifera.] Bol. Soc. geol. Peru **26** 1953: 247–261, figs.

Stammller, A. see Mohr, W.

Starobinetz, E. Y., & Eventov, Y. S. [On the age of the Paleogene in the middle of the Amu-Darye River.] [Foraminifera.] C. R. Acad. Sci. U.R.S.S. **58** 1948: 313–315. [In Russian.]

Stefanski, W. [Biocoenotic relations between the parasitic fauna and the bacterial flora of the alimentary tract. (Incl. protozoa).] Zool. Ž., Moscow **34**: 992–999. [In Russian.]

Stejskal, M. Gregarines found in the honey bee *Apis mellifera* Linnaeus in Venezuela. J. Protozool. **2**: 185–188, figs.

Stelck, C. R., & Wall, J. H. Foraminifera of the Cenomanian *Dunveganoceras* zone from the Peace River Area of Western Canada. Rep. Res. Counc. Alberta **70**: 1–81, figs.

Stepánek, M. (1). [The Rhizopodes as biological indicators of the contamination of waters.] Prirod. Sborn. Ostravsk. Kraje **14** 1953: 470–505. figs. [English summary, p.503.]

Stepánek, M. (2). Krytenky (Testacea) z Krkonos. Cas. nár. Mus. **123** 1954: 96–110, figs. [English summary.]

Stephan, W. Ein tortoner vulkanischer Brockhorizont in der oberen Süsswassermolasse Bayerns. [Foraminifera.] Geol. Bavarica **14** 1952: 76–85.

Sterbenz, F. J., & Lilly, D. M. A comparison of the effects of 8-azaguanine and flavotin on *Tetrahymena pyriformis* and *Tokophrya infusionum*. J. Protozool. **2** Suppl. 3.

Stiller, J. *Vorticella microstoma* Ehrenberg (Peritricha, Ciliata) als Bioindikator ökologisch verscheidener Gewässer. Ann. hist. nat. Mus. hung. N.S. 5 1954 : 191–201, figs.

Stobnicka, I. see Iwanczuk, I.

Stokstad, E. L. R., Broquist, H. P., & Sloane, N. H. Nutrition of micro-organisms. Annu. Rev. Microbiol. 9 : 111–144.

Stoll, N. R. Zoological nomenclatorial notes. [Plasmodium and Entamoeba.] J. Parasit. 41 : 318–319.

Stout, J. D. (1). The effect of partial steam sterilization on the Protozoan fauna of a greenhouse soil. J. gen. Microbiol. 12 : 237–240.

Stout, J. D. (2). Environmental factors affecting the life-history of three soil species of Colpoda (Ciliata). Trans. roy. Soc. N.Z. 82 : 1165–1188, figs.

Strausz, L. [Miocene in the S.W. Transdanubian Boreholes.] [Foraminifera]. Földt Közl. 80 1950 : 247–258. [Hungarian with English summary.]

Streber, F. see Pelaez, D.

Stubblefield, J. W. The morphology and life history of *Amphicantha ovalis* and *A. attenuata*, two new Haplosporidian parasites of Gregarines. J. Parasit. 41 : 443–459, figs.

Subbotina, N. N., Glushko, V. V. Pishvanova, L. S. [On the age of Lower Vorotische Horizon of the Pre-Carpathian Border Depression.] [Foraminifera.] C. R. Acad. Sci. U.R.S.S. 104 : 605–607. [in Russian.]

Suhama, M. The independence of the macronuclear nodes of *Condylostoma spatiosum* Ozaki & Yagi. J. Sci. Hiroshima Univ. (Zool.) 15 1954 : 221–228, figs.

Sujkowskii, Z. L. Average chemical composition of sedimentary rocks [Foraminifera.] Amer. J. Sci. 250 1952 : 360–374.

Suleimanov, I. S. [New genus *Gubkinella* and two new species, belonging to the family Heterohelicidae, from the Upper Senonian of southwestern Kizil-Kum.] [Foraminifera.] C. R. Acad. Sci. U.R.S.S. 102 : 623–624, figs. [In Russian.]

Sulzer, A. J. see Brooke, M. M.

Sureau, P., & Capponi, M. Note sur un piroplasmide de *Rattus norvegicus* observé dans la région du centre Viet-Nam. Bull. Soc. Path. exot. 48 : 823–828.

Sureau, P. see Capponi, M.

Suter, H. H. The general and economic geology of Trinidad, B.W.I. [Foraminifera.] Bull. col. Geol. Min. Res. 2 1951 : 177–217, figs.

Sutton, W. W. see Finlay, H. E.

Suzuki, S. Taxonomic studies on *Blepharisma undulans* Stein with special reference to the macronuclear variation. J. Sci. Hiroshima Univ. (Zool.) 15 1954 : 204–220, figs.

Svahn, K. *Haemogregarina bipileata* n. sp. from the Indian cobra, *Naja tripudians* (Merr.). Förh. K. fysiogr. Sällsk. Lund. 24 : 157–160, figs.

Svanbaev, S. K. [New species of coccidia in turkeys.] Trans. Inst. Zool. Acad. Sci. Kazakh, S.S.R. 3 : 161–163, figs. [In Russian.]

Svanidze, D. P. see Zasuchin, D. N

Svensson, R. On the resistance to heating and cooling of *Balantidium coli* in culture and some observations regarding conjugation. Exper. Parasit. 4 : 502–525.

Swerdlow, M. A., & Burrows, R. B. *Dientamoeba fragilis*, an intestinal pathogen. J. Amer. med. Ass. 158 : 176–178, figs.

Switzer, G., & Boucot, A. J. The mineral composition of some microfossils. J. Paleont. 29 : 525–533, figs.

Szarski, H. see Pigón, A.

Sztejn, J. Metodyka micropaleontologicznych prac przygotowawczych [Foraminifera.] Przegląd. Geol. 8 1953 : 41–42. (373–4).

Takagi, K. see Hara, K.

Takano, S. Palaeozoic System of Takayana, Gifu Prefecture. [Foraminifera.] *J. geol. Soc. Japan* **58** 1952 : 321. [Abstract in Japanese.]

Takano, S. *see* Arai, J.

Takano, T. Chichibu Paleozoic formations near Takayama, Gifu Prefecture. [Foraminifera.] *J. geol. Soc. Japan* **57** 1951 : 264. [in Japanese.]

Takaoka, Y. Omaeyama formation along Tama River. [Foraminifera.] *J. geol. Soc. Japan* **57** 1951 : 264-265.

Takayanagi, Y. (1). Foraminifera from the Hatake formation in the Sendai Basin. Short Pap. Inst. Geol. Tôhoku Univ. **4** 1952 : 52-64, figs.

Takayanagi, Y. (2). New genus and species of foraminifera found in the Tonohama Group, Kochi Prefecture, Shikoku, Japan. Short Pap. Inst. Geol. Tôhoku **5** 1953 : 25-36, fig.

Taliafero, M. O. *see* Mackie, T. T.

Taliaferro, L. G. *see* Taliaferro, W. H.

Taliaferro, W. H., & Pizzi, T. Connective tissue reactions in normal and immunized mice to a reticulotrophic strain of *Trypanosoma cruzi*. *J. inf. Dis.* **96** : 199-226, figs.

Taliaferro, W. H., & Taliaferro, L. G. Reactions of the connective tissue in chickens to *Plasmodium gallinaceum* and *Plasmodium lophurae* I. Histopathology during initial infections and superinfections. *J. inf. Dis.* **97** : 99-136, figs.

Taliaferro, W. H. *see* Moulder, J. W.

Tamás, G. [Quantitative plankton studies on Lake Balaton : VI. Biomass of the phytoplankton of the forties.] *An. Inst. Biol. Tihany* **23** : 95-109, fig.

Tamura, M., Sato, T., & Toyama N. Discovery of *Fusulina* from the Paleozoic formation in the northern part of Kitakami mountains. *J. geol. Soc. Japan* **58** 1952 : 154. [in Japanese.]

Tappan, H. *see* Loeblich, A. R. jr.

Tarshis, I. B. Transmission of *Haemoproteus lophortyx* O'Roke of the California quail by Hippoboscid flies of the species *Stilbometopa impressa* (Bigot) and *Lynchia hirsuta* Ferris. *Exper. Parasit.* **4** : 464-492, figs.

Tartar, V. Reactions of *Stentor coeruleus* to homoplastic grafting. *J. exp. Zool.* **127** 1954 : 511-575, figs.

Tasman, C., & Egeran, N. On the oil possibilities of Turkey with special reference to the Raman Field [Foraminifera.] *Proc. Third World Pet. Congr.* **1** 1951 : 187-198, figs.

Tatum, A. L. *see* Hughes, F. W.

Taylor, D. J. *see* Greenberg, J.

Taylor, R. H. *see* Bull, P. C.

Taylor, D. J., & Greenberg, J. (1). Virulence studies with a strain of *Entamoeba histolytica* maintained *in vitro* in liquid media. *J. Parasit.* **41** Suppl. : 14.

Taylor, D. J., & Greenberg, J. (2). Hyperactivity of metachloridine against *Plasmodium gallinaceum* in chicks maintained on a purified diet. *Proc. Soc. exp. Biol. Med.* **90** : 551-554.

Tchan, Y. T. *see* Bunt, J. S.

Tefankjian, A. *see* Nanney, D. L.

Téllez-Girón, C. News—Mexico. *Micropaleontology* **1** : 294.

Tentori, L. *see* Corradetti, A.

Termier, H., & Termier, G. Historie Géologique de la Biosphère. Paris 1952. 1-721, figs. [Protozoa.]

Termier, G. *see* Termier, H.

Ternek, Z. *see* Tolun, N.

Terry, R. J. Transmission of antimalarial immunity (*Plasmodium berghei*) from mother rats to their babies during lactation. *Trans. R. Soc. trop. Med. Hyg.* **49** : 302.

Tester, A. C. Additional facts concerning the age and origin of the type section of the Dakota Stage (abstract.) *Bull. geol. Soc. Amer.* **63** 1952 : 1386.

Tewari, H. B. *see* Das, S. M.

Thalmann, H. E. (1). New names for foraminiferal homonyms II. Contr. Cush. Fdn. **6** : 53.

Thalmann, H. E. (2). New names for foraminiferal homonyms III. Contr. Cush. Fdn. **6** : 82.

Thélin, L. Un nouveau Protiste du genre *Dermocystidium*, parasite de la perche. Rev. Suisse Zool. **62** Suppl. 307-318, figs.

Thenius, E. see Papp, A.

Théodoridès, J. (1). Les eugrégarines du genre *Gregarina* parasites de Coléoptères Ténébrionides. Ann. Parasit. hum. comp. **30** : 5-21, figs.

Théodoridès, J. (2). Grégaries parasites de Coléoptères Ténébrionides d' Israel. Ann. Parasit. hum. comp. **30** : 161-173, figs.

Théodoridès, J. (3). *Campanacephalus villiersi* n. gen. n. sp. (Eugregarina Stylocephalidae) parasite de *Macropodia variolaris* Ol. (Col. Tenebrionidae). Bull. Inst. Franç. Afr. N. **17A** : 813-817, figs.

Théodoridès, J. (4). Grégaries parasites de Coléoptères Ténébrionides d' Israel. Bull. res. Counc. Israel **4** : 395-396.

Théodoridès, J. (5). Contribution à l'étude des parasites et phorétiques de coléoptères terrestres. [Incl. protozoa.] Vie et Milieu, Suppl. **4** : 1-310, figs.

Théodoridès, J. (6). Morphologie, hôtes et répartition géographique de *Cystocephalus algerianus* Schreider var. *mauritanica* Tuzet et Théodoridès. Bull. Soc. zool. Fr. **79** : 452-458, figs.

Thiermann, E. see Naquira, F.

Thomas, A. N. see Kent, P. E.

Thomas, R. Thécamoebiens de la région Bordelaise. Bull. Soc. Hist. nat. Toulouse **89** 1954 : 245-264, figs.

Thomas, W. H. Heterotrophic nutrition and respiration of *Gonyaulax polyedra*. J. Protozool. **2** Suppl. 2-3.

Thompson, J. C. Morphology of a new species of *Tetrahymena*. J. Protozool. **2** Suppl. : 12.

Thompson, J. C. see Holz, G. G.

Thompson, M. L. Protozoa Art. 5. American Wolfcampian fusulinids. Paleont. Contr. Univ. Kansas **5** 1954: 1-226, figs.

Thompson, P. E., Reinertson, J. W., Bayles, A., McCarthy, D. A., & Elslager, E. F. Antiamebic action of 5-chloro-7-diethylamino-methyl-8-quinolinol and of other substituted 8-quinolinols in vitro and in experimental animals. Amer. J. trop. Med. Hyg. **4** : 224-248.

Thomson, H. M. *Perezia fumiferanae* n. sp., a new species of Microsporidia from the Spruce budworm *Choristoneura fumiferana* (Clem.). J. Parasit. **41** : 416-423, figs.

Thorne, J. see Fitzgerald, P. R.

Thorson, R. E. see Seibold, H. R.

Thurston, J. P. Observations on the course of *Eperythrozoon coccooides* infections in mice, and the sensitivity of the parasite to external agents. Parasitology **45** : 141-151, figs.

Thurston, J. P. see Hawking, F.

Timothée, C. Les infusioires du tube digestif d'un Addax *nasomaculatus*. Bull. Inst. Franç. Afr. noire **17A** : 80-83.

Todd, R. (1). Foraminifera. In Cooke, C. W., MacNeil, F. S., etc. 'Tertiary Stratigraphy of California.' U.S. geol. Surv. Prof. Paper **243-B** 1952 : 19-29.

Todd, R. (2). Recent literature on the foraminifera. Contr. Cushman Fdn. **6** : 54-55.

Todd, R. (3). Recent literature on the foraminifera. Contr. Cushman Fdn. **6** : 83-84.

Todd, R. (4). Recent literature on the foraminifera. Contr. Cushman Fdn. **6** : 121-122.

Todd, R. (5). Recent literature on the foraminifera. Contr. Cushman Fdn. **6** : 150-151.

Todd, R., & Kniker, H. T. An Eocene foraminiferal fauna from the Agua Fresca shale of Magallanes Province, southernmost Chile. Spec. Publ. Cushman Fdn. **1** 1952 : 1-28, fig.

Tolentino, P. Italian contribution to the study of toxoplasmosis. *Sci. med. Ital.* **4**: 711-730.

Tollmann, A. (1). Die Foraminiferentwicklung im Torton und Untersarmat in der Randfazies der Eisenstädter Bucht. *S. B. öst. Akad. Wiss. Abt. I.* **164** 1954 : 193-202, figs.

Tollmann, A. (2). Die Gattungen *Lingulina* und *Lingulinopsis* (Foraminifera) im Torton des Wiener Beckens und Südmährens. *S. B. öst. Akad. Wiss. Abt. I.* **163** : 609-619, figs.

Tolun, N., & Ternek, Z. Notes géologiques sur la région de Mardin. [Foraminifera.] *Bull. geol. Soc. Turk.* **3** 1952 : 1-19, fig. [French summary.]

Tomita, G., Koizumi, S., Kurosawa, A., & Kubota, S. Effect of tropolone and its allied compounds on the ciliary movement of the oyster and of *Paramecium*. *Sci. Rep. Tōhoku Univ.* (4) **21** : 8-12.

Toranzos, L. B., & Numa, R. I. Contribucion al estudio biometrico del *Trypanosoma equinum* Voges 1901 en la rata blanca. *An. Inst. Med. reg. Tucuman* **4** : 213-221. [English summary.]

Torch, R. Cytological studies on *Pelomyxa carolinensis* with special reference to the mitochondria. *J. Protozool.* **2** : 167-177, figs.

Toriyama, R. (1). Permian fusulinids from the Kitikama mountain-land, northeast Japan. *Mem. Fac. Sci. Kyusu Univ. geol.* **D3** 1952 : 127-156, figs.

Toriyama, R. (2). Geology of Akiyoshi. [Foraminifera.] *Mem. Fac. Sci. Kyūshū Univ.* **D4** 1954 : 39-97, figs.

Toriyama, R. (3). A gigantic fusulinid species from the Kitikami massif, northeastern Japan. *Trans. Proc. Palaeont. Soc. Japan* **15** 1954 : 181-184, figs.

Toriyama, R., & Choh, R. The discovery of fusulinids in the Island of Hainan. *Proc. Imp. Acad. Tokyo* **19** 1943 : 587-590, figs.

Torrealba, J. F., Moreno, J., Diaz Vasquez, A., & Ramos, I. Enfermedad de Chagas y tripanosomiasis de Tejera. *Publ. Direcc. Cult. Univ. Andes, Venezuela No. 47* 1955 : 57 pp. figs.

Toyama, N. see Tamura, M.

Tracey, J. I. see Ladd, H. S.

Tracey, M. V. Cellulase and chitinase in soil *Amoeba*. *Nature, Lond.* **175** : 815.

Trager, W. (1). Further studies with extracellular malaria parasites *in vitro* : an effect of leucovorin. *J. Protozool.* **2 Suppl.** : 5.

Trager, W. (2). Studies on the cultivation of malaria parasites. In : Some physiological aspects and consequences of parasitism (11th Conf. on protein metabol.), N. Brunswick, U.S.A. 1955 : 3-14, figs.

Trapp, E. see Nobrega, P.

Travassos Santos Dias, J. A. Estudos sobre os hematozoarios dos peixes de agua doce de Moçambique. I. Descrição de algumas novas espécies de tripanossomas parasitas da *Tilapia mossambica* (Peters, 1852). *Moçambique No. 82* : 47-63, figs.

Travis, B. V. see Kirner, S. H.

Treadwell, R. C. Moody's Branch —Cockfield contact in Sabine Parish, Louisiana, and adjacent areas. [Foraminifera.] *Bull. Amer. Ass. Petrol. Geol.* **38** 1954 : 2302-2323, figs.

Tretzel, E. Technik und Bedeutung des Fallenfanges für ökologische Untersuchungen. *Zool. Anz.* **155** : 276-287.

Trevisan, L. L'Elba orientale e la sua tettonica di scivolamento per gravità. [Foraminifera.] *Mem. Inst. geol. Univ. Padova* **16** 1950 : 1-39, figs.

Tripathi, Y. R. Experimental infection of Indian Major carps with *Ichthyophthirius multifiliis* Fouquet. *Curr. Sci.* **24** : 236-237.

Troelsen, J. C. (1). On the value of aragonite tests in the classification of the Rotaliidea. *Contr. Cushman Fdn.* **6** : 50-51.

Troelsen, J. C. (2). Notes on *Ceratobulimina* and *Allomorphinida*. Contr. Cushman Fdn. **6** : 80-81, fig.

Troelsen, J. C. (3) *Globotruncana contusa* in the White Chalk of Denmark. Micropaleontology **1** : 76-82, figs.

Tsur-Tchernomoretz, I. Problems of piroplasms in Israel. Refuah Veterinarith, Tel-Aviv **12** : 253-246. [In Hebrew and English.]

Tuffrau, M. Les caractères spécifiques dans le genre *Euplates*. Bull. Soc. zool. Fr. **79** : 463-465.

Tuffrau, M. see Fauré-Fremiet, E.

Turnovsky, K. Ueber das Vorkommen von Uvigerinenarten aus dem Vindobon des Weinen Beckens im Miozaen von Adana. Bull. geol. Soc. Turk. **5** 1954 : 199-202, fig.

Turteltaub, R. see Coutts, W. E.

Tuzet, O., & Manier, J. F. Sporozoaires et ciliés parasites de Myriapodes Diplopodes récoltés dans la forêt de la Mandraka (Madagascar). Intensité du parasitisme chez les *Glomeris*. Mém. Inst. sci. Madagascar **9A** : 15-22, figs.

Tuzet, O., & Zuber-Vogeli, M. Grégaries et ciliés parasites des vésicules séminales de *Dichogaster inermis* Michaelson, oligochète de Man (A.O.F.). Bull. Inst. Franç. Afr. N. **17A** : 369-376, figs.

Twerenbold, E. Les Préalpes entre la Sarine et les Tours d'Ai, région des Monts Chevreuils [Foraminifera & Radiolaria]. Bull. Soc. fribourg. Sci. nat. **44** : 5-116, figs.

Ueno, T. see Asami, K.

Uricchio, W. A. The effect of allyl acetone on the establishing of immunity to cecal coccidiosis (*Eimeria tenella*) in Chicks. Proc. Pennsylv. Acad. Sci. **29** : 71-77.

Uspenskaja, A. V. [The biology and distribution of *Myxosoma cerebralis* (Hofer 1903) Plehn 1905, the causative agent of "twist disease in trout." C. R. (Doklady) Acad. Sci. U.S.S.R. **105** : 1132-1135. [In Russian.]

Uno, D., Águiar, A. A., Carvalhal, S., Paladino, N., & Soubihe, N. V. Estudo comparativo dos resultados da R.F.C. para diagnóstico da molestia de Chagas, obtidas com a realização das técnicas qualitativa e quantitativa. Fol. clin., S. Paulo **22** 1954 : 85-96. [English summary.]

Uvo, D. see Carvalhal, S.

Vallmitjana, L. Observaciones sobre los cilios y otras estructuras de los protozoos. Publ. Inst. Biol. appl. Barcelona **20** : 5-15, figs.

Van Doorninck, W. M. see Becker, E. R.

Varela, G., Roch, E., & Vazquez, A. Virulencia, cultivo, polisacáridos, toxinas y la prueba del colorante estudiados con una cepa de *Toxoplasma gondii*. Rev. Salubr. Enferm. trop. **15** : 73-80. [English summary.]

Vargas-Salazar, R. see Coutts, W. E.

Vasina, S. G., & Zasuchin, D. N. [Development of tissue forms of *Plasmodium gallinaceum* in chick embryos.] Med. Parasitol., Moscow No. **1** 1955 : 40-46, figs. [In Russian.]

Vasina, S. G. see Zasuchin, D. N.

Vauzel, M., Roubaud, E., & Galliard, H. Terminologie du paléodisme. W.H.O. Monogr. Ser. No. **25**, Geneva, 1954 : 95 pp., figs.

Vaughn, C. M. see Mackie, T. T.

Vazquez, A. see Varela, G.

Weber, J. see Weiser, J.

Veillon, M., & Vigneaux, M. Caractères paléogeográfique de l'Éocène moyen dans le pays Cordelais. C. R. Acad. Sci. Paris **241** : 1597-99.

Venglinski, I. V. [New data on the stratigraphy of the Miocene deposits at Vishkov in the Transcarpathian Province.] [Foraminifera] Bull. Acad. Sci. Ukr. **3** : 296-298. [Ukrainian with Russian summary.]

Venzo, G. Il Miocene a facies marchigiana dell'Urbinate occidentale. Stratigrafia, tettonica e paleogeografia. Mem. Soc. tosc. Sci. nat. **61A** 1954 : 129-149, fig.

Vermeil, C. Enquête sérologique sur la toxoplasmose humaine dans la Nord de la Tunisie. Arch. Inst. Pasteur Tunis **32** : 407-410.

Verolini, F. Persistenza della immunità innata al *Plasmodium gallinaceum* in galline faraone splenectomizzate. Riv. Parassit. **16** 1955 : 205.

Verolini, F. see Corradetti, A.

Vialat, C. see Lozac'h, M.

Vigneaux, M., & Magné, A. Observations récentes sur le Burdigalien de Cestas (Gironde). [Foraminifera.] C. R. Soc. géol. Fr. **1952** : 351-353.

Vigneaux, M. see Veillon, M.

Vincent, P. see Neal, R. A.

Vincke, I. see Rodhain, J.

Vittal, M. see Karandikar, K. R.

Vivier, E. Contribution à l'étude de la conjugaison chez *Paramecium caudatum*. Bull. Soc. zool. Fr. **80** : 163-170.

Vlerk, I. M. van der. Correlation of the Tertiary of the Far East and Europe [Foraminifera.] Micropaleontology **1** : 72-75, figs.

Voigt, E. (1). Ein bisher unbekanntes Vorkommen von Orbitoiden-führendem Maastricht-Trümmerkalk bei Ilten am Sarstedt-Sehnder Salzstock. Z. deutsche geol. Gesell. **103** (1951) 1952 : 127.

Voigt, E. (2). Das Alter der Reitbrooker Schichten. Z. deutsche geol. Gesell. **104** 1952 : 168-169.

Vojtěchovská, M. see Petruš, M.

Vollbrechtshausen, R. Tierexperimentelle Untersuchungen zur Frage der aktiven Immunisierung bei Toxoplasmose. Z. Tropenmed. Parasit. **6** : 159-165. [English summary.]

Voorthuysen, J. H. van. Remarks on the internal structure of the shells of Ammonoidea, Gastropoda, and Foraminifera, with a short introduction on biostratigraphy and paleo-ecology. Paläont. Zeit. **26** 1952 : 30-48, figs.

Vorobyev, B. S. see Bilik, A. A.

Vostryakov, A. V., Mizinov, I. V., Moskvitin, A. I., & Chiguryaeva, A. A. [Climatic conditions of the Akchagil, based on lithological and micropaleontological investigations in the Southern Trans-Volga territory.] [Foraminifera.] C. R. Acad. Sci. U.R.S.S. **105** : 144-146. [In Russian.]

Wade, M. A new genus of the Chapmaninae from Southern Australia. Contr. Cushm. Fdn. **6** : 45-49, figs.

Waern, B. Palaeontology and stratigraphy of the Cambrian and lowermost Ordovician of the Bödahamm Core. [Foraminifera.] Bull. geol. Inst. Univ. Uppsala **34** 1952 : 1-40.

Wagstaffe, R., & Fidler, J. H. The Preservation of Natural History Specimen's. Vol. 1. Invertebrates. London 1955 : i-xiii, 1-205.

Wagtendonk, W. J. van see Conner, R. L.

Wahle, H. see Mohr, W.

Wales, J. H., & Wolf, H. Three protozoan diseases of trout in California. Calif. Fish Game **41** : 183-187

Wall, J. H. see Stelck, C. R.

Walton, A. C. Parasites of Amphibia. [Incl. protozoa.] J. Parasit. **41** Suppl.: 50.

Walton, W. R. Ecology of living benthonic foraminifera, Todos Santos Bay, Baja, California. J. Paleont. **29**: 952-1018, figs.

Wanson, M. see Rodhain, J.

Warburg, W. An attempt to produce a specific serum against *Plasmodium berghei* in the rabbit. Bull. res. Counc. Israel **5B** : 144-147, fig.

Warren, L. G. Biochemical studies on chicken macrophages infected with *Trypanosoma cruzi* (Chagas). J. Parasit. **41** Suppl.: 15.

Watanabe, I. On the ciliary reversal in *Spirostomum ambiguum*. Zool. Mag., Tokyo **64** : 334-337. [English summary, 337.]

Watanabe, K. Partial unconformity in the Tertiary strata of the north-eastern region of the Kwanto Mountainland. *J. geol. Soc. Japan* **58** 1952 : 523-528, figs. [English summary, p.528.]

Watanabe, K., & Iwahori, S. Stratigraphical studies of the Tertiary strata in the Toki Basin, Gifu Prefecture. [Foraminifera.] *J. geol. Soc. Japan* **58** 1952 : 433-443, figs.

Watson, H. J. C. *see* Fairbairn, H.

Weeks, L. G. Factors of sedimentary basin development that control oil occurrence. [Foraminifera.] *Bull. Amer. Ass. Petr. Geol.* **36** 1952 : 2071-2124, figs.

Wegner, Z. *see* Wysocka, F.

Weil, R. Zur Frage des Einflusses des Höhenklimas auf Hühnermalaria bei Blutinokulation mit *Plasmodium gallinaceum* Brumpt. *Acta trop.* **12** : 53-66. [English summary.]

Weinreb, S. (1). *Homalozoon vermiculare* (Stokes) : I. Morphology and reproduction. *J. Protozool.* **2** : 59-66, figs.

Weinreb, S. (2). *Homalozoon vermiculare* (Stokes) : II. Pharyngeal granules and trichites. *J. Protozool.* **2** : 67-70, figs.

Weis, D. S. Endogenous reserves in *Ochromonas malhamensis*. *J. Protozool.* **2 Suppl.** : 8-9.

Weiser, J. (1). Contribution to the systematics of Schizogregarina. *Čsl. Parasit.* **1** 1954 : 179-212, figs. [Czech with English summary.]

Weiser, J. (2). Zur Entwicklung der Schizogregarine *Syncystis mirabilis* (A. Schneider). *Čsl. Parasit.* **2** : 181-184, figs. [German summary.]

Weiser, J. (3). A new classification of the Schizogregarina. *J. Protozool.* **2** : 6-12, figs.

Weiser, J. (4). A new classification of the Schizogregarina : a correction. *J. Protozool.* **2** : 88.

Weiser, J., & Veber, J. Über die Möglichkeiten des biologischen Kampfes gegen *Hyphantria cunea*. [Microsporidia] *Čsl. Parasit.* **2**, 191-199, figs. [German summary.]

Weiss, L. (1). Foraminifera and origin of the Gardners Clay (Pleistocene), Eastern Long Island, New York. *Prof. Paper Geol. Surv. U.S.* **254-G** 1954 : 143-162, figs.

Weiss, L. (2). Foraminifera from the Paleocene Pale Greda formation of Peru. *J. Paleont.* **29** : 1-21, figs.

Weiss, L. (3). News—Peru. *Micro-paleontology* **1** : 100.

Weiss, L. (4) Planktonic index foraminifera of northwestern Peru. *Micropaleontology* **1** : 301-319, figs.

Weld, J. T. *see* Kean, B. H.

Wells, J. W. Thomas Wayland Vaughan. *Bull. Amer. Ass. Petr. Geol.* **36** 1952 : 1495-1497, fig.

Wells, J. W. *see* Ladd, H. S.

Wenzel, F. Über eine Artentstehung innerhalb der Gattung *Spathidium* (Holotricha, Ciliata). [*S. ascendens* n. sp. und *S. polymorphum* n. sp.] *Arch. Protistenk.* **100** : 515-546, figs.

Werner, H. (1). Zur Frage des plazentaren Übergangs von *Plasmodium berghei* (congenitale Malaria). *Naturwissenschaften* **42** : 376.

Werner, H. (2). Beobachtungen über den Einfluss von Trypanosomen-Infektionen auf die Embryonalentwicklung von weissen Mäusen und Goldhamster. *Z. Tropenmed. Parasit.* **6** : 150-158, figs. [English summary.]

Westermann, J. H. The water-bore of Oranjestad 1942-43, and its implication as to the geology and geohydrology of the island of Aruba. N.W.I. [Foraminifera.] *Proc. Kön. Ned. Akad. Wetensch. B* **54** 1951 : 140-150.

Whittington, J. *Trichomonas vaginalis* infection in the male. *Brit. med. J.* **2** : 1209.

Wichtermann, R. (1). The biology of *Paramecium*. New York (The Blakiston Co.) 1953. pp.XVI + 527, figs.

Wichtermann, R. (2). The usefulness of the one-celled animal, *Paramecium*, in studying the biological effect of high dosage X-radiation. Proc. Pa. Acad. Sci. **29** : 78-93, figs.

Wichtermann, R. see Figge, F. H. J.

Wiese, L. see Förster, H.

Wilcox, A. see Jeffrey, G. M.

Wilde, G. L. see Skinner, J. W.

Willett, K. C., & Fairbairn, H. The Tinde experiment: a study of *Trypanosoma rhodesiense* during eighteen years of cyclical transmission. Ann. trop. Med. Parasit. **49** : 278-292, figs.

Willett, K. C. see Gordon, R. M.

Williams, H. B. see Finley, H. E.

Williamson, J. see Garnham, P. C. C.

Wilson, E. J. Foraminifera from the Gaviota formation east of Gaviota Creek, California. Bull. Dep. Geol. Univ. Calif. **30** 1954 : 103-170, figs.

Wilson, J. E., & Slavin, D. Hexamitiasis of turkeys. Vet. Rec. **67** : 236-242, figs.

Wilson, W. B., & Collier, A. Preliminary notes on the culturing of *Gymnodinium brevis* Davies. Science **121** : 394-395.

Winckel, C. W. F. Long latency in *Plasmodium vivax* infections in a temperate zone. Doc. Med. geogr. trop. **7** : 292-298.

Wirtschafter, S. K., Jahn, T. L., & Saltman, P. D. Chromatographic studies on *Trichomonas vaginalis*. J. Protozool. **2** Suppl.: 9.

Wise, D. L. Carbon sources for *Polytoma caeca*. J. Protozool. **2** : 156-158, fig.

Wittner, M. Inhibition and reversal of oxygen poisoning in *Paramecium*. J. Protozool. **2** Suppl. : 4-5.

Witwicka, E. Kilka uwaz z historii badan i morfologii otwornic. [Foraminifera.] Przegląd Geol. **2** 1953 : 13-18, figs.

Wohlfeil, M. see Leiner, M.

Wolcott, G. B. Chromosomes of the four species of human malaria, studied by phase microscopy. J. Heredity **46** : 53-57, figs.

Wolf, A. see Seneca, H.

Wolf, H. see Wales, J. H.

Wolfe, P. A. see Phillips, B. P.

Wolken, J. J., Mellon, A. D., & Greenblatt, C. L. Environmental factors affecting growth and chlorophyll synthesis in *Euglena*. I. Physical and chemical. II. The effectiveness of the spectrum for chlorophyll synthesis J. Protozool. **2** : 89-96, figs.

Wollin, G. see Ericson, D. B.

Wollin, J. see Ericson, D. B.

Woods, R. W. Acoustic resonance of micro-organisms to supersonic vibrations. Proc. Soc. exp. Biol. Med. **89** : 406-409, fig.

Woody, H. B. see Woody, N. C.

Woody, N. C., & Woody, H. B. American trypanosomiasis (Chagas' disease). First indigenous case in the United States. J. Amer. med. Ass. **159** : 676-677, figs.

Wright, W. H. see Phillips, B. P.

Wykoff, D. E., Fonseca, J. R. C., & Ritchie, L. S. Epidemiology of amebiasis: possible influence of water supply, coincident with diverse features of terrain on the occurrence of intestinal protozoa. Amer. J. trop. Med. Hyg. **4** : 465-471.

Wysocka, F., & Wegner, Z. [Observations on the vitality of *Chilomastix mesnili* in vitro.] Bull. State Inst. mar. trop. Med., Gdansk **6** : 255-265, figs. [Polish with English summary.]

Yabe, H., & Eguchi, M. On a limestone with *Favosites* from Erh-tao-kou, West of Kirin, Manchuria. Proc. Imp. Acad. Tokyo **19** : 681-687, figs.

Yamada, H., Fujimoto, H., & Yoshida, S. Paleontological study of the Nabeyama limestone at Kuzuu, Tochigi Prefecture. [Foraminifera.] J. geol. Soc. Japan **57** 1951 : 265-266, figs.

Yamazi, I. (1). Plankton investigation in inlet waters along the coast of Japan. VIII. The plankton of Miyazu Bay in relation to the water movement. *Publ. Seto mar. biol. Lab.* 4 : 269-284, figs.

Yamazi, I. (2). Plankton investigation in inlet waters along the coast of Japan. XVI. The plankton of Tokyo Bay in relation to water movement. *Publ. Seto mar. biol. Lab.* 4 : 285-310, figs.

Yamazi, I. (3) Plankton investigation in inlet waters along the coast of Japan. XVII. Seasonal succession of zooplankton in the inner area of Tanabe Bay from June to October, 1954. *Publ. Seto mar. biol. Lab.* 4 : 311-320, figs.

Yamazi, I., & Horibata, T. Plankton investigation in inlet waters along the coast of Japan. XVIII. Seasonal succession of plankton in Taizi Bay in the years 1951-53. *Publ. Seto mar. biol. Lab.* 4 : 321-336, figs.

Yanai, T. On the influence of *Escherichia coli* upon the experimental infection of *Entamoeba histolytica* in rats. II. Effect of the administration of antibiotics, killed bacterial cells and their metabolic products. *Keio J. Med.* 3 1954 : 129-139, figs.

Yanshin, A. L. [On the submergence of the fold-system towards the South Urals and on the tectonic character of the South-Emborsk plateau.] [Foraminifera.] *Bull. Soc. Nat. Moscow geol.* 30 : 51-73, figs. [In Russian.]

Yen, T. P., Sheng, C. C., & Keng, W. P. The discovery of fusuline limestone in the metamorphic complex of Taiwan. *Bull. geol. Surv. Taiwan* 3 1951 : 35-44, fig. [English summary.]

Yoeli, M. A report on intestinal disorders accompanied by large numbers of *Dientamoeba fragilis*. *J. trop. Med. Hyg.* 58 : 38-41.

Yoeli, M., Becker, Y., & Bernkopf, H. The effect of West Nile virus on experimental malaria infection (*Plasmodium berghei*) in mice. *Harefuah, Jerusalem* 49 : 116-119. [Hebrew with English summary.]

Yoshida, S. *see* Yamada, H.

Younes, A. *see* Carvalhal, S.

Young, M. D., Eyles, D. E., Burgess, R. W., & Jeffery, G. M. Experimental testing of the immunity of Negroes to *Plasmodium vivax*. *J. Parasit.* 41 : 315-318.

Young, M. D. *see* Jeffery, G. M.

Yusa, A. The systematic significance of the buccal organelles in *Paramecium*. *J. Protozool.* 2 Suppl.: 5.

Zastěra, M. *see* Havlik, D.

Zasuchin, D. N., & Popov, P. P. [The eminent parasitologist Giovanni Battista Grassi. (On the occasion of the centenary of his birth and 30 years of his death)]. *Med. Parasit.*, Moscow 3 : 270-271.

Zasuchin, D. N., & Svanidze, D. P. [History of the discovery and description of the first parasitic amoebae.] *Vracebnoje Delo No.* 5, 1953 : 1-2. [In Russian.]

Zasuchin, D. N., & Vasina, S. G. [Toxoplasmosis.] In : Natural nidi of human diseases and regional epidemiology. Leningrad 1955 : 299-317, figs. [In Russian.]

Zasuchin, D. N., & Zasuchina, G. D. [Parasitic pneumonia in children.] In : Natural nidi of human diseases and regional epidemiology. Leningrad. 1955 : 331-334. [In Russian.]

Zasuchin, D. N. *see* Vasina, S. G.

Zasuchina, G. D. *see* Zasuchin, D. N.

Zázvorka, V. Nynější stav foraminifer, popsaných jaroslaven pernerem z křídového útvaru Čech. *Cas. nár. Mus.* 123 1954 : 74-84.

Zei, M. M. I foraminiferi della scogliera a *Cladocora caespitosa* della Punta della Pietre Nere presso il lago di Lesina, in provincia di Foggia. R. C. Acad. Napoli 21 1954: 83-106, figs.

Zeledon, R. (1). Tripanosomiasis rangeli. Rev. Biol. trop. 2 1954: 231-268, figs. [English summary.]

Zeledon, R. (2). Inmunidad natural de algunos Triatominae al *Trypanosoma equinum* Vogues, 1901. Rev. Biol. trop., Costa Rica 3: 171-177 [English summary.]

Zelle, M. R. Genetics of microorganisms. Annu. Rev. Microbiol. 9: 45-96.

Zeuthen, E. Growth as related to the cell cycle in single cell cultures of *Tetrahymena pyriformis*. J. Embryol. exp. Morph. 1 1953: 239-249.

Zhggenti, E. M. [Deposits of the Konsk stage, formed in normal conditions of salinity of the sea.] [Foraminifera.] C. R. Acad. Sci. U.R.S.S., N.S. 96 (1) 1954: 159-160. [In Russian.]

Zimmermann, W. J. see Becker, E. R.

Zlotnick, A. Observations on a parasite found in leucocytes of the peripheral blood in a case of hepatosplenomegaly. Trans. R. Soc. trop. Med. Hyg. 49: 472-475, figs.

Zöbelin, H. K. Die Bunte Molasse bei Rottenbuch (Obb.) und ihre Stellung in der subalpinen Molasse. [Foraminifera.] Geol. Bavaria 12 1952: 1-86, figs.

Zuber-Vogeli, M. see Tuzet, O.

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Biometry.—Biometry in fossil foraminiferal studies, R. H. Burma; Biometrical analysis of foraminifera from the Italian Oligocene, C. Emiliani (1); Biometrics of Devonian foraminifera, V. Pokórny (2); Biometry of *Trypanosoma equinum*,

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Brackish.—Ecology of brackish-water foraminifera in the New York Bight, P. H. Ronai; Ecology of Belgian brackish-water protista, W. Conrad & H. Kufferath.

Freshwater.—Ecology of freshwater plankton, G. Huber-Pestalozzi (1); Stagnant freshwater protozoa, D. Chardez (2); Ecology of meadow pool protozoa, J. Gelei; Freshwater, free-floating green algae

etc. D. Rühmann ; Plankton of Lac de Bret, F. Cosandey ; Freshwater protozoa in northeastern Spain, R. Margalef (2) ; Ecology of protozoa in Mallorca, R. Margalef (1) ; Plankton of Lake Balaton, G. Tamas ; Limnology of Colorado Lakes, R. W. Pennak ; Ecology of protozoa in Minnesota lakes, G. A. Cole ; Ecology of French thekamoebians, R. Thomas ; Testacean ecology in Czechoslovakian rivers, M. Stěpánek (1) ; Ecology of dinoflagellates in Lake Balaton, O. Sebestyén ; *Tetrahymena* in Canadian waters, D. F. Gruchy ; *Tetrahymena* from fresh waters of Central and South America, A. M. Elliott & R. E. Hayes (1) ; Factors affecting population fluctuations of *Urceolaria*, T. B. Reynoldson.

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Palaeoecology.—Foraminifera as climatic indicators in deep-sea sediments, W. Schott (3) ; Pelagic foraminifera as environmental indicators, F. D. Smith ; Palaeoecology of foraminifera in the Chalk Marl, T. P. Burnaby ; Palaeoecology of *Globorotalia*, D. B. Ericson, Wollin & Wollin ; Palaeoecology of Italian Oligocene foraminifera, C. Emiliani (1) ; Climatic change in Russian Quaternary, A. V. Vostryakov etc. ; Palaeoecology of Tertiary planktonic foraminifera, W. H. Akers ; Palaeoecology of foraminifera in the Texan Eocene, N. M. C. Curtis ; Palaeoecology of Californian Pliocene foraminifera, O. L. Bandy, G. L. Harrington (1) ; Palaeoecology of Colombian Cretaceous foraminifera, V. Petters (1) ; Palaeoecology of Tertiary foraminifera in Japan, Y. Higuchi ; Ecology of foraminifera off Argentine coast, E. Boltovskoy (2).

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- H. Seneca & D. Ides**; Connective tissue reactions to *Trypanosoma cruzi* infection in mice, **W. H. Taliaferro & T. Pizzi**; Effect of *Trypanosoma cruzi* on metabolism of infected chick macrophages in culture, **L. G. Warren**; Host-parasite relations of *Trypanosoma rhodesiense*, **K. C. Willett & H. Fairbairn**; Effect of *Trypanosoma brucei* on blood proteins of infected mice, **H. Olberg**; Effect of gregarines on host, **R. Loubatières**; Host of *Cystocephalus algerianus* var. *mauritanicus*, **J. Théodoridès** (6); Host-parasite relations between *Nematopsis* and oysters and crabs, **V. Srague & P. E. Orr, jr.**; Effect of coccidial infection on muscular work of chickens, **L. Levine & C. A. Herrick**; Effect of coccidial infection on intestinal motility in fowls, **C. S. Schildt & C. A. Herrick**; Effect of age of rabbits on coccidial infection, **P. C. Bull & R. H. Taylor**; Effect of altitude malaria infection in fowls, **R. Weil**; Effect of altitude and hypoxia on *Plasmodium* infection in birds, **F. W. Hughs & A. L. Tatum**; Connective tissue reactions to *Plasmodium* infections in chicks, **W. H. Taliaferro & L. G. Taliaferro**; **J. W. Moulder & W. H. Taliaferro**; Comparative susceptibility of erythrocytes from mammals and birds to infection with avian *Plasmodium* spp., **R. B. McGhee**; Infectiousness of gametocytes of avian *Plasmodium* in various host-parasite combinations, **C. G. Huff & D. F. Marchbank**; Effect of *Plasmodium* infection on blood changes in fowls, **P. M. Carrescia & F. Lioy**; Effect of male hormones on infection of rats with *Plasmodium*, **A. K. Chakrabarti**; Effect of milk diet on *Plasmodium* infection in rats, **A. Corradetti, L. Tentori & F. Verolini**; Effect of suprarenals on course of malaria in mice, **G. Fabiani & J. Orfila** (3); Resistance of mice to *Plasmodium* infection, **E. M. Nadel, J. Greenberg, G. E. Jay & G. R. Coatney**; Effect of age in rat infection with *Plasmodium*, **I. Singer, R. Hadfield & M. Lakonen**; Effect of diet on *Plasmodium* infection of mice, **J. Sautet & J. Caporali**; Effect of milk diet on *Plasmodium* infection of mice, **P. M. Carrescia**; Effect of histamine and antihistamine on resistance of rat to *Plasmodium*, **R. Pautrizel & C. Martrenchar**; Effect of *Plasmodium* infection on pigment storage in rats, **B. G. Maegraith & T. Deegan**; Effect of splenectomy on *Plasmodium* infection in mice, **G. Fabiani & J. Orfila** (2); Inhibition of infection with *Plasmodium* by Indian ink in mice, **O. J. R. Loxley**; Intracellular position of *Plasmodium*, **J. D. Fulton & T. H. Flewett**; Extracellular position of human *Plasmodium* spp., **P. G. Shute & M. Maryon** (2); Changes in erythrocytes in *Plasmodium ovale* infections, **J. A. Sinton** (2); Host-parasite relations of *Actinomyxidia*, **J. Janiszewska** (1); Effect of *Dermocystidium* on oysters, **S. M. Ray & A. C. Chandler**; Effect of numbers of *Toxoplasma* inoculated on duration of infection in mice, **D. E. Eyles & N. Coleman**; Toxoplasmosis in monkeys, **W. Mohr, H. Wahle & A. Stammier**; Host-parasite relations in bovine rumen ciliates, **A. E. Oxford**; Infection of mice with *Eperythrozoon*, **J. P. Thurston**.

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Immunity, serology: Detection of antigens of *Entamoeba histolytica* by fluorescence, M. **Goldman**; Agglutination of *Leishmania*, S. **Adler** & J. **Adler** (1); Agglutinins against *Leishmania* in hamsters, S. **Adler** & J. **Adler** (2); Effect of behaviour of fish on resistance to trypanosomes, J. H. **Barrow**; Effect of X-rays on immunity of mice to *Trypanosoma duttoni*, B. N. **Jaroslav**; Preparation of *Trypanosoma cruzi* antigen, A. E. **Manso Soto**, G. A. **Loretti** & C. S. **Miatello**; Application of serological tests for diagnosis of Chagas' disease, S. **Carvalhal** etc. (1, 2); O. P. **Portugal** etc.; D. **Uvo** etc.; Immunization of mice against *Trypanosoma cruzi*, T.

Pizzi & F. **Knierim**; Lytic action of blood on cultures of *Trypanosoma cruzi*, I. I. **Silva**; Mechanism of immunity to Chagas' disease, T. **Pizzi** & M. **Rubio**; Immunity to *Trypanosoma equiperdum* in rats induced by oxphenarsine, W. **Cantrell** & G. D. **Betts**; Antigenic differences between Trichomonads of pigs, W. R. **Sanborn**; Acquired immunity in rabbit coccidiosis, A. I. **Osipovsky**; Phagocytosis and lysis of *Leucocytozoon schizonts*, A. B. **Cowan** (1); Immunity in malaria, L. **Parrot** (1); Immunity in *Plasmodium* infections of animals, A. **Corradetti**; Pre-munition to malaria, E. **Sergent** (1, 3); Residual pre-munition in malaria, L. **Parrot** (2); Natural immunity to *Plasmodium* in rodents, E. **Sergent** & A. **Poncet** (3); Transmission of immunity to *Plasmodium* in rats from mother's milk, R. J. **Terry**; Effect of specific serum on *Plasmodium berghei*, W. **Warburg**; Immunity against *Plasmodium* infection in mice kept on milk diet or treated by sulphonamides, G. **Fabiani** & J. **Orfila** (1); Absence of cross-immunity between *Plasmodium* spp. of monkeys, P. C. C. **Garnham** & R. S. **Bray**; Immunity to *Plasmodium vivax* in American Negroes, M. D. **Young**, D. E. **Eyles**, R. W. **Burgess** & G. M. **Jeffery**; *Toxoplasma* antigens, F. **Roger**, P. **Giroud** & A. **Roger**; Immunization against toxoplasmosis, R. **Voilbrechtshausen**; Immunity in rabbit toxoplasmosis, P. **Nobrega**, E. E. **Trapp** & M. **Giovannoni** (2); Immunity in murine toxoplasmosis, L. **Jacobs** & M. L. **Melton**. [Protozoa in relation to Disease—see under **Economics**.]

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Ruminants, stomach (India) : Ophryoscolecididae (Ciliata) recorded, A. K. Banerjee.

Hepatozoon in gray squirrels, C. M. Herman & D. L. Price.

Mongooses, blood (Africa) : new trypanosomes, M. S. Grewal.

Cervidae : key to *Eimeria* spp. recorded, J. F. Landram & R. F. Honess.

Addax nasomaculatus, intestine (West Africa) : *Diplodinium* spp. (Ciliata), C. Timothée.

Bubalus bubalis, intestine (Philippines) : *Entamoeba bubalus* spn. (Rhizop.), G. A. Noble.

Buffalo, stomach (India) : *Entodinium bengalensis* sp.n. (Ciliata), A. K. Banerjee.

Cattle, stomach (India) : *Diplodinium indicum* sp.n., *Eremoplastron asiaticus* sp.n., *Epidinium bovis* sp.n. (Ciliata), A. K. Banerjee

Cervus canadensis nelsoni, intestine (U.S.A.) ; *Eimeria wapiti* sp.n. (Coccid.), R. F. Honess (2).

Chaus chaus, intestine (Czechoslovakia ex Russia) : *Eimeria chaus* sp.n. (Coccid.), B. Ryšavý.

Citellus l. leucurus, caecum (U.S.A.) incidence of flagellates, F. R. Evans.

Clethrionomys glareolus, brain (Czechoslovakia) : *Toxoplasma glar-eoli* sp.n. (Sporozoa), B. Erhardova (3).

Corynorhinus rafinesquii, faeces (U.S.A.) : *Klossia variabilis* sp.n. (Coccid.), N. D. Levine, V. Ivens & F. J. Kruidenier (1).

Dicrostonyx torquatus, blood (U.S.A.) : *Trypanosoma* sp. (Mastig.), W.B. Quay.

Dolichotis patagonum (Cavy), intestine (Argentina) : *Eimeria dolichotis* sp.n. (Sporoz.), E. G. Morini, J. J. Boero & A. Rodriguez.

Eptesicus f. fuscus, blood (U.S.A.) : *Trypanosoma* sp. (Mastig.), R. M. Hedrick.

Equus asinus, kidneys (U.S.A.) : *Klossiella equi* sp.n. (=K.e. Baumann 1946) (Coccid.), H. R. Seibold & R. E. Thorson (1, 2).

Helogale varia, blood (Congo) : *Babesia vanhoofi* sp.n. (Haemospor.), R. M. de Smet & M. Lips.

Muntiacus muntjak, stomach (India) : *Entodinium muntiacum* sp.n. (Ciliata), A. K. Banerjee.

Neotoma lepida, intestine (U.S.A.) : *Dorisella arizonensis* sp.n. (Coccid.), N. D. Levine, V. Ivens & F. J. Kruidenier (2).

Odocoileus h. hemionus (mule deer: U.S.A.) : *Eimeria* and *Anaplasma* (Sporoz.), J. F. Landram & R. F. Honess.

Peromyscus maniculatus, faeces (U.S.A.) : *Klossia perplexens* sp.n. (Coccid.), N. D. Levine, V. Ivens & F. J. Kruidenier (1)

Phyllotis a. amicus, intestine (Peru) : *Eimeria weissi* sp.n. (Coccid.), L. G. Mugaburu.

Phyllotis darwini, blood (Peru) : *Trypanosoma* sp. (Mastig.), A. H. Alva.

Rupicapra rupicapra, rumen (Germany) : *Entodinium rupicapræ* sp.n., *Anoplodinium rupicapræ* sp.n., *Eudiplodinium maggioides* sp.n. (Ciliata), H. Christl.

Rusa unicolor, stomach (India) : *Epidinium rusa* sp.n. (Ciliata), A. K. Banerjee.

Sciurus carolinensis, blood (U.S.A.) incidence of *Hepatozoon* (Coccid.), C. M. Herman & G. M. Clark.

Semnopithecus entellus, intestine (India) : *Entamoeba* sp. (Rhizop.), H. N. Ray & G. A. Shivnani.

Talpa europaea, intestine (Italy) : *Isospora talpae* sp.n., *I. ricci* sp.n. (Coccid.), G. Agostinucci (2).

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Accipiter gentilis, intestine (U.S.A.)
Isospora buteonis (1st record) (Coccid.)
J. Holling & C. D. Fowle.

Anas platyrhynchos, intestine (Germany) : *Eimeria anatis* sp.n. (Coccid.)
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Centrocercus urophasianus, intestine (U.S.A.) : (i) *Tritrichomonas simoni* sp.n. (Mastig.) **R. F. Honess** (1); (ii) *Eimerica pattersoni* sp.n. (Coccid.), **R. F. Honess & G. Post.**

Columba oenas and *C. palumbus*, blood (Italy) : incidence of *Haemoproteus columbae* (Haemospor.) infection, **G. Agostinucci** (1).

Columba palumbus, blood (England) : *Haemoproteus* (Haemospor.), **P. G. Shute & M. Maryon** (2)

Ramphastos toco, blood (Brazil) : *Plasmodium pinottii* sp.n. (Sporoz.), **J. Muniz & R. de R. L. Soares.**

Streptopelia chinensis tigrina, blood (Java) : *Trypanosoma* sp., (Mastig.), **F. C. Kraneveld & M. Mansjoer.**

Turdus migratorius, blood (U.S.A.): incidence of Haemosporidia, **R. D. Manwell** (3).

Turkey, intestine (England) : *Cryptosporidium meleagridis* sp.n. (Coccid.), **D. Slavin.**

Turkey, intestine (Middle Asia) : *Isospora heissenii* sp.n. (Coccid.), **S. K. Svanbaev.**

Reptilia :

Reptiles, blood (Middle Asia) : incidence of blood protozoa, **A. M. Andruško & G. S. Markov** (2).

Reptiles of Karakum desert : incidence of infection with blood protozoa, **A. M. Andruško & G. S. Markov** (3).

Haemogregarines in reptiles of Chicago Zoo, **R. W. Hull & J. H. Camin.**

Lizards, intestine (California) : *Hexamastix kirbyi* sp.n., *H. crassus* sp.n. (Mastig.), **B. M. Honigberg** (1).

Eremias grammica, *E. intermedia*, *Phrynocephalus interscapularis*, blood (Middle Asia) : *Leishmania zmeevi* sp.n. (Mastig.), **A. M. Andruško & G. S. Markov** (1).

Gecko, blood (Africa) : new trypanosome, **M. S. Grewal.**

Gekko japonicus, gut (Japan) : *Eimeria koidzumii* sp.n. (Coccidia), **H. Matubayasi.**

Naja tripudians, blood (India) : *Haemogregarina bipileata* sp.n. (Sporoz.), **K. Svahn.**

Sceloporus teapensis, blood (Mexico) *Trypanosoma serveti* sp.n. (Mastig.), **D. Pelaez & F. Streber.**

Sceloporus occidentalis, *Uta stansburiana*, blood (U.S.A.) : *Schellackia occidentalis* sp.n. (Coccid.), **J. S. Bonorris & G. H. Ball.**

Testudo argentina, intestine (London) : *Retortamonas testudae* sp.n. (Mastig.), **M. A. R. Ansari** (3).

Thecadactylus rapicauda, blood (Venezuela) : *Trypanosoma ocumensis* sp.n. (Mastig.), **J. V. Scorza & C. Dagert.**

Amphibia :

Amphibia : list of parasitic protozoa recorded since 1954, **A. C. Walton.**

Amphibia : description of endoparasitic protozoa, **D. Chardez.**

Tadpoles of frogs and toads, gut (U.S.A.) : Opalinid ciliates [flagellates] recorded, **C. L. Nesslinger.**

Ambystoma tigrinum, intestine (U.S.A.) : *Eimeria distorta* sp.n., *E. kingi* sp.n., *E. waltoni* sp.n., *E. ambystomi* sp.n. (Coccid.) **L. H. Saxe.**

Taricha granulosa, blood (U.S.A.) : *Trypanosoma ambystomae* (record for new host) (Mastig.), **D. L. Lehmann** (1).

Pisces :

Fishes (Gulf of Mexico) : first record of Myxosporidia, **R. H. Rigdon & J. W. Hendricks.**

Fishes of Barents Sea : parasitic protozoa, **J. I. Poljanskij.**

Achirus fasciatus, blood (Atlantic ocean) : *Haemogregarina achiri* sp.n., (Coccid.), **D. C. Saunders.**

Artediellus europeus, gall bladder (Barents Sea) : *Ceratomyxa artedielli* sp.n. (Myxospor.), **J. I. Poljanskij.**

Cyprinus carpio hematopterus, various tissues (river Amur) : *Thelohannulus acuminatus* sp.n., *T. dogieli* sp.n., *T. amurensis* sp.n., *T. nikolskii* sp.n. (Micro-spor.), **A. C. Achmerov** (1).

Gadus morhua (Barents Sea), (1)
fins : *Trichodina murmanica* sp.n.
(Ciliata); (2) muscles : *Plistophora
gadi* sp.n. (Microspor.), J. I. Poljan-
skij.

Gasterosteus aculeatus, gills (Barents
Sea) : *Trichodina gracilis* sp.n. (Cili-
ata), J. I. Poljanskij.

Hippoglossus hippoglossus, gall blad-
der (Barents Sea) : *Sphaeromyxa
minuta* sp.n. (Myxospor.), J. I.
Poljanskij.

Lateolabrax japonicus, muscles
(Japan) : *Neochloromyxum crucifor-
mum* gen. n., sp.n. (Myxospor.), K.
Matsumoto.

Myxcephalus scorpius, urinary
bladder (Barents Sea) : *Myxoproteus
brevis* sp.n. (Myxospor.), J. I. Poljan-
skij.

Ophicephalus striatus, blood (India):
Trypanosoma striati sp.n. (Mastigoph.)
S. S. Qadri.

Perca fluviatilis, skin (Lake of
Geneva) : *Dermocystidium guyenoti*
sp.n. (Haplospor.), L. Thélin.

Pollachius virens, fins (Barents
Sea) : *Trichodina murmanica* sp.n.
(Ciliata), J. I. Poljanskij.

Raja radiata, ovary and urinary
bladder (Barents Sea) : *Trichodina
ovidiucti* sp.n. (Ciliata), J. I. Poljan-
skij.

Thunnus thynnus, muscles (Atlantic
coast of N. Africa) : *Kudoa clupeidae*
Hahn (Myxospor.) 1st record, R. P.
Dollfus.

Tilapia mossambica, blood (East
Africa) : *Trypanosoma napolesi* sp.n.
T. rebeloi sp.n., *T. serranoi* sp.n.
(Mastig.), J. A. Travassos Santos
Dias.

Xiphias gladius, muscles (Japan) :
Chloromyxum musculoliquefaciens
sp.n. (Myxospor.), K. Matsumoto.

Tenebrionid larvae (Japan) : *Stein-
ina minor* sp.n. (Gregarin), K. Obata.

Termites, gut (India) : Hypermas-
tid flagellates described, K. R.
Karandikar & M. Vittal.

Anomala dubia (France) : *Sticto-
spora provincialis* var. n. *anomalae*
(Gregar.) J. Théodoridès (5).

Anoplogenius cyanescens (Japan) :
Alaspora depressa gen.n., sp.n.
(Gregarin.), K. Obata.

Aphodius rectus (Japan) : *Didy-
mophyes diminuta* sp.n. (Gregarin.),
K. Obata.

Apis mellifera, ventriculus (Vene-
zuela) : Gregarines (undetermined),
M. Stejskal.

Apelta cingulata, gut (S. Africa) :
Gregarina fastidiosa sp.n. (Sporoz.),
A. D. Harrison.

Archotermopsis wroughtoni, gut
(Pakistan) : *Prorotrichonympha pris-
tina* gen.n., sp.n., *Parajoenopsis
cephalotricha* gen.n., sp.n. (Mastig.
Hypermast.), M. Saleem.

Arthromacra sumptuosa (Japan) :
Gregarina arthromacrae sp.n. (Greg-
arin.), K. Obata.

Blaps spp. (France) : *Stylocephalus
eastoni* sp.n., *S. phalloides* sp.n.
(Gregar.), J. Théodoridès (5).

Chilocorus rubidus (Japan) : *Greg-
arina chilocori* sp.n. (Gregarin.), K.
Obata.

Chlaeniuss spp. (Japan) : *Gregarina
ovosatellitis* sp.n., *Ascocephalus arma-
tus* gen.n. sp.n., *Ramicephalus ozakii*
gen.n., sp.n. (Gregarin.), K. Obata.

Choristoneura fumiferana, various
tissues (N. America) : *Perezia fumi-
feranae* sp.n. (Microspor.) H. M.
Thomson.

Coeagrion quadrigatum (Japan) :
Hoplorrhynchus hexacanthus sp.n.
(Gregarin.), K. Obata.

Copris lunaris, gut (France) : *Didy-
mophyes tuzetae* sp.n. (Gregar.), J.
Théodoridès (5).

Coptotermes heimi, gut (India) :
Pseudotrichonympha cardiformis sp.n.
P. pisciformis sp.n., *P. subapicalis*
sp.n., *Holomastigotoides dharwarensis*
sp.n., *H. rayi* sp.n., *Spirotricho-
nympha froilanoi* sp.n., *S. karnataka*
sp.n. (Mastigoph.), K. R. Karandika
& M. Vittal.

Insecta :

Beetles : protozoal parasites re-
corded, J. Théodoridès (5)

Coleoptera Tenebrionidae of Israel:
record of gregarines, with host-list,
J. Théodoridès (2, 4)

Coleoptera Tenebrionidae : descrip-
tion of parasitic *Gregarina* spp., with
host-list, J. Théodoridès (1).

Craspedonotus tibialis (Japan) : *Gregarina craspedonoti* sp.n. (Gregarin.), K. Obata.

Gonocephalum rusticum : *Gregarina ormieri* sp.n. (Sporoz.), J. Théodoridès (1).

Gonocephalus pubens (Japan) : *Gregarina gonocephali* sp.n. (Gregarin.) K. Obata.

Hegeter tristis : *Gregarina* sp. (Sporoz.), J. Théodoridès (1)

Heterotermes malabaricus, gut (India) : *Pseudotrichonympha cardiformis* sp.n., *P. pisciformis* sp.n., *P. subapicalis* sp.n., *Holomastigotoides dharwarensis* sp.n., *Spirotrichonympha froilanoi* sp.n. (Mastigoph.), K. R. Karandikar & M. Vittal.

Lucanus cervus (France) : *Actinoccephalus conicus* var. n. *magna* (Gregar.), J. Théodoridès (5).

Macropodia variolaris, gut (West Africa) : *Campanacephalus villiersi* gen. n., sp.n. (Gregar.), J. Théodoridès (3).

Melanosilpha capensis, gut (S. Africa) : *Gregarina sandoni* sp.n. *G. impetuosa* sp.n. (Sporoz.), A. D. Harrison.

Phylan abbreviatus (France) : *Gregarina maculata* var. n. *banyulensis* (Gregar.), J. Théodoridès (5).

Phylan planiusculus : *Gregarina* sp. (Sporoz.), J. Théodoridès (1).

Reticulitermes lucifugus, gut (Romania) : *Trichonympha agilis* var. n. *danubica* (Mastig.), M. A. Ionescu & A. Murgoci.

Scarabaeid larvae (Japan) : *Stictospora coelocystis* sp.n. (Gregarin.), K. Obata.

Scarabaeus laticollis, gut (France) : *Didymophyes scarabaei* sp.n. (Gregar.) J. Théodoridès (5).

Scaurus puncticollis : *Gregarina wahrmanni* sp.n. (Sporoz.), J. Théodoridès (1).

Scaurus striatus : *Gregarina* sp. (Sporoz.), J. Théodoridès (1).

Sisyphus sisyphi, gut (France) : *Didymophyes sisyphi* sp.n. (Gregar.), J. Théodoridès (5).

Silpha carinata (France) : *Ancyrophora cervicornis* sp.n. (Gregar.), J. Théodoridès (5).

Tennopteryx phalerata, gut (S. Africa) : *Gregarina gibbsi* sp.n. (Sporoz.) A. D. Harrison.

Tribolium castaneum, fat body (England) : *Tribolocystis garnhami* sp.n. (Schizogreg.), *Nosema buckleyi* sp.n. (Microspor.), A. S. Dissanaika (2).

Uloma latimamus (Japan) : *Gregarina tokonoi* sp.n. (Gregarin.), K. Obata.

Myriapoda :

Diplopoda : parasitic protozoa reported from Madagascar, O. Tuzet & J. F. Manier.

Sphaerotheriidae, gut (Madagascar) : *Nyctotherus madagascari* sp. n. (Ciliata), O. Tuzet & J. F. Manier.

Spirostrepsidae, gut (Madagascar) : *Nyctotherus mandrakae* sp.n. (Ciliata), *Stenophora mandrakae* sp.n. (Gregar.), O. Tuzet & J. F. Manier.

Arachnida :

Ticks : list of vectors of piroplasms of domestic animals, V. F. Kapustin.

Scutovertex minutus (Czechoslovakia) : *Gregarina scutovertexi* sp. n., *G. corolla* sp.n. (Gregar.), B. Erhardova (1).

Crustacea :

Eupagurus prideauxi (Mediterranean) : new host for *Pebrilla paguri* (Folliculinid.) J. P. Changeux & C. D. Deboutteville.

Mollusca :

Molluscs : parasitic ciliates recorded, A. Hampl.

Doubtful record of sporozoan in *Cardium edule*, J. B. Cowey.

Unio crassus and *Anodonta cygnea*, gills (Germany) : *Trichodina unionis* sp.n. (Ciliata), A. Hampl.

Annelida :

Allobophora caliginosa, various tissues (France) : *Monocystis hispida* sp.n., *Rhabdocystis gyriniformis* sp.n., *Zygocystis grassei* sp.n. (Gregar.), R. Loubatières.

Allobophora chlorotica, seminal vesicles (France) : *Apolocystis pertusa* sp.n., *Nematocystis claviformis* sp.n. (Gregar.), R. Loubatières.

Allobophora gigas (France) : *Monocystis buccalis* sp.n., *Nematocystis pistilliformis* sp.n., *Zygocystis cordiformis* sp.n. (Gregar.), R. Loubatières.

Dichogaster inermis, seminal vesicles (West Africa) : *Monocystis dichogasteri* sp.n. (Gregar.), *Ptychostomum dichogasteri* sp.n. *Anoplophrya dichogasteri* sp.n. (Ciliata) O. Tuzet & M. Zuber-Vogeli.

Eisenia foetida (France) : *Monocystis critata* sp.n., *M. cuneiformis* sp.n., *M. lopadiformis* sp.n., *Zygocystis eiseniae* sp.n. (Gregar.), R. Loubatières.

Eisenia rosea (France) : *Dirhynchocystis elongata* sp.n., *Monocystis hederacea* sp.n., *M. proteiformis* sp.n., *Nematocystis sinuosa* sp.n., *Rhynchocystis ovata* sp.n. (Gregar.), R. Loubatières.

Limnodrilus antonii, body cavity (Poland) : *Siedleckiella antonii* sp.n. (Spor. Actinomyx.), J. Janiszewska (2).

Octolasium complanatum (France) : *Nematocystis clipeiformis* sp.n., *N. navicula* sp.n., *N. tuzeti* sp.n. (Gregar.), R. Loubatières.

Polydora giardi, gut (France : Atlantic coast) : (i) *Hovasiella polydorae* gen.n., sp.n. (Ciliata), P. de Puytorac (1); (ii) *Thelohania georgevitchi* sp.n. (Microspor.), P. de Puytorac (2).

Lumbricus terrestris (France) : *Nematocystis caudata* sp.n. *Rhynchocystis ovata* sp.n. (Gregar.), R. Loubatières

Tubifex tubifex (Poland), (1) body cavity : *Raabeia gorlicensis* gen.n., sp.n., (2) gut : *Hexactinomyxon hedvigi* sp.n. (Actinomyx.), J. Janiszewska (1).

Platyhelminthes :

Tapeworms hyperparasitized by *Nosema* (Microspor.), A. S. Dissainaike (1).

Coelenterata :

Anthopleura xanthogrammica, body cavity (California) : *Foettingeria* sp. (Ciliata), G. H. Ball & R. E. Moebius.

Protozoa :

Protozoa as hosts of parasites, M. Deckart.

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Lecudina sp. (Gregar.) from marine Annelid worms (Coast of California) : *Amphiacantha ovalis* sp.n., *A. attenuata* sp.n. (Haplospor.), J. W. Stubblefield..

Ciliate (indet.) parasitic in *Polydora* (Polychaete) (Atlantic coast of France) : *Thelohania georgevitchi* sp.n. (Microspor.), P. de Puytorac (2).

Eremoplastron bovis (Ophryoscolecid) : *Sphaerita hoarei* sp.n. (Chytrid), G. Lubinsky (1).

Eudiplodinium maggi (Ophyro-scolecid) : *Sagittospora cameroni* gen. n., sp.n. (Phycomycetes), G. Lubinsky (2).

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vasiveness of *E. histolytica*, **M. Bock & L. Mudrow-Reichenow** ; Influence of bacteria on *E. histolytica* in rats, **T. Yanai, J. Okamoto** ; Effect of intestinal flora of guinea-pigs on course of infection with *E. histolytica* **B. P. Phillips, P. A. Wolfe, C. W. Rees, H. A. Gordon, W. H. Wright & J. A. Reyniers** ; Laboratory diagnostic methods for amoebiasis, **A. Neghme, R. Silva & J. Artigas** ; Differential parasitological diagnosis of human amoebiasis, **P. Manson-Bahr** ; PVA technique for diagnosis of human amoebae in culture, **L. Norman & M. M. Brooke** (2) ; Diagnosis of amoebiasis by culture method, **L. Norman & M. M. Brooke** (1) ; Assessment of culture media for *E. histolytica*, **T. Simitch, Z. Petrovitch & D. Chibalitch** ; Cultivation of *E. histolytica* in various media, **C. Harinasuta & T. Harinasuta** ; Culture of *E. histolytica* trophozoites kept for 4 days, **M. Goldman & R. K. Carver** ; Destruction of *E. histolytica* cysts by iodine and silver nitrate, **S. L. Chang & M. Baxter** ; **S. L. Chang, M. Baxter & L. Eisner** ; Pathogenicity of Russian strains of *E. histolytica*, **V. B. Schensnovich** ; *E. histolytica* in experimentally infected rats, **M. C. McCowen & M. E. Callender** ; Amoebiasis in Armenia, **M. A. Sarkisjan** ; Incidence of amoebiasis in U.S.A., **R. E. Rinehart & H. Marcus** ; Outbreak of amoebiasis in Indiana, U.S.A., **M. M. Brooke, D. M. Melvin, R. Sappenfield, F. Payne, F. R. N. Carter, A. C. O. Offutt & W. W. Frye** ; *E. histolytica* incidence in children of N. Carolina, **T. T. Mackie** etc. ; Epidemiology of amoebiasis in Japan, **D. E. Wykoff, J. R. C. Fonseca & L. S. Ritchie** ; Experimental transmission to man of *Iodamoeba*, *Endolimax* and *Entamoeba*, **R. C. Rendtorff & C. J. Holt** ; *E. polecki* infections in man, **R. B. Burrows & G. E. Klink** ; Survival of *E. histolytica* cysts at low temperatures, **S. L. Chang** ; Pathogenicity of *Dientamoeba*, **M. Yoeli** ; **M. A. Swerdlow & R. B. Burrows**.

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phagous flies, W. A. Lamborn ; Vectors of leishmaniasis in Sudan, R. Kirk & D. J. Lewis ; Vector of Kala-azar in India, R. B. Heisch ; Reservoir hosts in human leishmaniasis, C. A. Hoare (4) ; Natural foci of human leishmaniasis in Georgia, U.S.S.R., G. M. Maruashvili ; Long incubation period in Oriental sore, P. A. J. Smith ; Cutaneous leishmaniasis in French Guiana, H. Flöch ; American cutaneous leishmaniasis F. Pifano etc. ; Mucocutaneous leishmaniasis in Brazil, F. Nery-Guimaraes (1) ; Primary skin lesion in Kala-azar, P. E. C. Manson-Bahr Long incubation period in Kala-azar, W. H. Jopling ; Infantile Kala-azar in Maltese islands, T. J. Aguis Ferrante ; Kala-azar in Kenya, J. A. McKinnon & N. R. E. Fendall ; Foxes as reservoir hosts of Kala-azar in Brazil, L. M. Deane & M. P. Deane ; *L. donovani* infection in hamsters, A. L. Ritterson.

Trypanosomiasis.—Sir David Bruce's researches on trypanosomiasis, W. MacArthur ; Method for concentration trypanosomes in blood, R. Devignat & A. Dresse ; Trypanosomiasis in West Africa, H. W. Mulligan, C. A. Hoare (2) ; Effect of barbiturate narcosis on course of trypanosome infection in rodents, M. Petru & M. Vojtěchovská ; *T. lewisi* in Italian rats, V. Giuliani ; Comparison of diagnostic methods for Chagas' disease, M. S. de Romaña & C. Romaña ; Life-cycle of *T. cruzi* in mammalian tissues, C. Romaña (2) ; Effect of *T. cruzi* on connective tissue elements in mice, W. H. Taliaferro & T. Pizzi ; Absence of hereditary transmission in *T. cruzi*, C. Romaña (1) ; *T. cruzi* in macaque monkeys, H. Seneca & A. Wolf ; Incidence of *T. cruzi* in Brazilian Triatomid bugs, E. Dias (1) ; Chagas' disease in Brazil, D. T. de Lucena & L. Costa ; Distribution of *T. cruzi* in Brazil, J. M. B. de Aragão, G. H. Aguirre, J. M. Leal & E. Serafim ; A. G. S. Lobo, A. M. Borba & J. de Souza ; Incidence of Chagas' disease in Brazil determined by complement fixation test, S. Carvalhal etc. (1, 2) ; O. P. Portugal etc. ; D. Uvo etc. ; Chagas' disease in S. Paulo region of Brazil,

S. Carvalhal etc. (3) ; Chagas' disease in Peru, F. Naquira & N. Naquira ; Chagas disease in Argentina, E. Dias (2) ; First case of Chagas' disease in U.S.A., N. C. Woody & H. B. Woody ; Chagas' disease and *T. rangeli* in Venezuela, J. F. Torrealba, J. Moreno, A. Diaz Vasquez & I. Ramos ; Human trypanosomiasis due to *T. rangeli* (= *T. ariarii*), H. Groot ; Life-cycle and transmission of *T. rangeli*, A. Herbig-Sandreuter ; French contributions to the study of sleeping sickness, E. Roubaud ; Reservoir hosts in human trypanosomiasis, C. A. Hoare (4) ; Reservoir hosts of *T. rhodesiense*, C. H. N. Jackson ; *T. rhodesiense* infections in Urundi, J. Marneffe ; Infectivity to man of *T. rhodesiense* after prolonged transmission through mammals, K. C. Willett & H. Fairbairn ; Failure to produce "hybrids" of *T. brucei* and *T. gambiense*, H. Fromentin ; Bibliography of French works on *T. dimorphon*, *T. caecalboui* and *T. pecaudi*, G. Bouet & E. Roubaud ; Factors affecting infection of *Glossina* with *T. vivax* and its transmission, H. Fairbairn & H. J. C. Watson ; Course of experimental infection of monkeys and dogs with *T. congolense*, F. C. Goble & R. F. Krueger ; Mechanical transmission of *T. congolense*, J. M. S. Lucas ; Experimental infection of fowls with *T. evansi*, V. S. Alwar & G. Ramanujachari ; Mal de Cadeiras (*T. equinum*) in Brazil, G. V. L. Kubiak & A. Molfi ; Search for vectors of *T. equinum*, R. Zeledon (2) ; *T. avium* in canaries, J. R. Baker (2) ;

Animal flagellosis.—*Bodo* spp. in human urine and mouth, Z. Rybicka ; *Histomonas* infection in turkeys induced by blood-inoculation, W. C. McGuire ; *Trichomonas vaginalis* in human males of Czechoslovakia, J. Jira & J. Hnizdie ; Experimental infection of women with *Trichomonas vaginalis*, K. Asami & M. Nakamura ; Passages of *Trichomonas vaginalis* through rabbit eyes, B. H. Kean & J. T. Weld ; *Trichomonas* spp. in nasal cavity and caecum of pigs, B. W. Buttrey ; Differentiation of Trichomonads of pigs by agglutination reaction, W. R. San-

born; Experimental infection of cows with *Trichomonas* from pigs, P. R. Fitzgerald, A. E. Johnson, J. Thorne & D. M. Hammond; Hexamitiasis in turkeys, J. E. Wilson & D. Slavin; Human giardiasis (general), M. A. R. Ansari (2); Incidence of *Giardia* infection in Warsaw children, I. Iwanczuk & I. Stobnicka; Effect of disinfectants on cysts of human *Giardia*, L. Ćerva (1); *Trichomonas vaginalis* infection in males, W. E. Coutts etc.; J. Whittington; F. L. Lydon;

Coccidiosis.—New *Cryptosporidium* pathogenic to turkeys, D. Slavin; Fowl coccidiosis, E. Scholtyseck (2); Effect of temperature on sporulation of oocysts and incubation periods in *Eimeria* spp. of poultry, S. A. Edgar; Effect of digestive juices in fowl on *Eimeria* infection, M. Ikeda; Coccidial oocysts in "deep litter" of poultry houses, S. F. M. Davies & L. P. Joyner; Fowl coccidiosis in Spain, A. S. Franco; Human coccidiosis in Natal, S. E. Dodds & R. Elsdon-Dew; Human infections with *Iso-spora* in U.S.A., C. F. Routh, J. E. McCroan & C. G. Hames; Life-cycle of *Iospora felis*, D. J. Hitchcock.

Malaria.—Simuliid vectors of *Leucocytozoon* of ducks, A. M. Fallis, R. C. Anderson & G. F. Bennett; Gametogenesis in Haemosporidia, especially *Plasmodium*, A. Bishop; Evolution of *Plasmodium*, R. D. Manwell (1); Malariaological terminology, M. Vauzel, E. Roubaud & H. Galliard; Unsolved problems concerning human malaria parasites, J. A. Sinton (1); Immunity in malaria, L. Parrot (1); Immunity in *Plasmodium* infections of animals, A. Corradetti; Residual premunition in malaria, L. Parrot (2); Epidemiological significance of gameteocyte output in malaria, H. G. S. Morin; Henry's reaction in the diagnosis of malaria, J. Schneider & L. Hartmann; Diagnosis of malaria parasites in films of clotted blood, D. M. Melvin; Immunity to *P. vivax* in American Negroes, M. D. Young, D. E. Eyles, R. W. Burgess & G. M. Jeffery; Long latency in infections with *P. vivax* strains of

temperate climates, C. W. F. Winckel; Factors affecting transmission of human malaria, G. Davidson; Effect of D.D.T. on sporogony of *Plasmodium* in mosquitos, B. N. Mohan (3); Refractoriness of *Culex* to infection with *P. falciparum*, Jaswant Singh & B. N. Mohan; Transmission of *P. malariae* by *Anopheles* in laboratory, P. G. Shute & M. Maryon (1); Exoerythrocytic stages of *P. ovale*, P. C. C. Garnham etc.; Changes in erythrocytes in *P. ovale* infections, J. A. Sinton (2); *P. ovale* in French West Africa, A. Masseguin & A. Palinacci; *P. ovale* in French Cameroons, J. Languillon, J. Mouchech & E. Rivola; Comparison of African and Pacific strains of *P. ovale*, G. M. Jeffery, A. Wilcox & M. D. Young; *P. schwetzi*, from chimpanzee: development in mosquitos, transmission to and infection in man, J. Rodhain; J. Rodhain & R. Dellaert (1, 2); Bibliography on *P. berghei*, Anon. (3); Intracellular position of *P. berghei*, J. D. Fulton & T. H. Flewett; Latent *P. berghei* infections, E. Sergent (1); Suppression of *P. berghei* by virus, M. Yoeli, Y. Becker & H. Bernkopf; Course of *P. berghei* infection in rodents, E. Sergent & A. Poncet (1, 2, 3); Course of *P. berghei* infection in mice in relation to blood changes, G. Arcoles & P. M. Carrescia; Effect of milk diet on *P. berghei* infection, A. Corradetti, L. Tentori & F. Verolini; Effect of milk diet of mice of different ages on infection with *P. berghei*, P. M. Carrescia; Effect of milk diet on infection of mice with *P. berghei*, P. Durand & M. Mathis (2); Congenital transmission of *P. berghei*, H. Werner (1); *P. berghei*: development in mosquitos and cyclical transmission, J. Rodhain, M. Wanson & J. Vincze (1, 2); Variation in serum proteins in infection with *P. berghei*, R. M. de Smet; *P. praecox* in sparrows of Iraq, A. H. Al-Abbass; Connective tissue reactions to *Plasmodium* infection in chicks, W. H. Taliaferro & L. G. Taliaferro; J. W. Moulder & W. H. Taliaferro; Variation in susceptibility of *Aedes* spp. to *P. gallinaceum*, B. N. Mohan (1);

Susceptibility of *Anopheles* spp. to *P. falciparum*, B. N. Mohan (2); Viability of sporozoites of *P. gallinaceum* in non-susceptible hosts in relation to their histotropism, G. Raffaele; Natural immunity of guinea-fowl to *P. gallinaceum*, F. Verolini.

Piroplasmosis.—List of ticks-vectors of piroplasmoses of domestic animals, V. F. Kapustin; Research on piroplasms in Israel, I. Tsur-Tchernomoretz; First record of *Babesia argentina* in Peruvian cattle, B. E. Parra Ormeño (2); Species of bovine *Babesiella* in Europe, T. Simitch, Z. Petrovitch & R. Rakovec.

Other Sporozoa.—Gregarines pathogenic to bees in Venezuela, M. Stejskal; Effect of *Nematopsis* (Gregarines) on oysters and crabs, V. Sprague & P. E. Orr jr.; Laelaptid mites as vectors of *Hepatozoon* of squirrels, G. M. Clark; Myxosporidiosis ("Twist disease") due to *Myxosoma* of trout in Russia, A. V. Uspenskaja; Biological control of moth *Hyphantria* by parasitic *Thelohania*, J. Weiser & J. Veber; *Nosema* infection of ventriculus of bees, L. Bailey; Human sarcosporidiosis in Sudan, J. E. Mackinnon & P. Abbott; *Dermocystidium* pathogenic to oysters, S. M. Ray & A. C. Chandler; *Dermocystidium* infection of oysters off Florida, C. E. Dawson.

Ciliates.—Human balantidiosis in Costa Rica, R. Céspedes & P. Morera; *Balantidium coli* in rats, V. V. Bogdanović; Physiology and host-parasite relations in rumen ciliates, A. E. Oxford; *Ichthyophthirius* infection among aquarium fishes, Y. R. Tripathi; *Tetrahymena* epibiotic on and pathogenic to fishes, R. F. Nigrelli, S. Jakowska & M. Padnos

Toxoplasmosis.—Toxoplasmosis (general), E. G. Nauck; R. C. Rendorff; D. N. Zasuchin & S. G. Zasuchina; Human toxoplasmosis (general), F. Naquira, A. Neghme & E. Thiermann; Toxoplasmosis in infants, Anon. (1); Polish works on toxoplasmosis, Z. Kozar; Techni-

que of dye-test for toxoplasmosis, M. M. Brooke & A. J. Sulzer; Compement-fixation test for toxoplasmosis, F. Roger, P. Giroud & A. Roger; Immunization against toxoplasmosis, R. Vollbrechtshausen; Isolation of pure *Toxoplasma* for antigens, M. Behrens & H. Geissler; Viability of *Toxoplasma* under different conditions, H. Geissler; Viability of *Toxoplasma* in carcasses, E. Käss; Variation in virulence of *Toxoplasma*, R. Lainson (2); Increase of virulence of *Toxoplasma* by mice passages, M. L. Melton & L. Jacobs; Immunity in rabbit toxoplasmosis, P. Nobrega, E. E. Trapp & M. Giovannoni (2); Absence of *Toxoplasma* in experimentally infected non-biting insects, L. Schmidtke (2); Duration of "droplet" transmission of *Toxoplasma* in guinea-pigs, Z. Schmidtke (1); Experimental toxoplasmosis, J. M. Doby & S. Deblock; J. M. Doby S. Deblock & M. Doby-Dubois; Toxoplasmosis in Italy, P. Tolentino; Human toxoplasmosis in Tunis, C. Vermeil; Human and canine toxoplasmosis in Algeria, L. Balozet; Toxoplasmosis in dogs, L. Jacobs, M. L. Melton & M. K. Cook; *Toxoplasma* in tissues of dog kept as pet, A. C. Krause; Canine toxoplasmosis complicated by distemper, R. S. F. Campbell, W. B. Martin & E. D. Gordon; Canine toxoplasmosis in France, M. Lozac'h & C. Vialat; Canine toxoplasmosis in Tennessee, U.S.A., C. L. Gibson & J. R. Jumper; Characteristic of Mexican strains of *Toxoplasma*, G. Varela, E. Roch & A. Vazquez; Effect of cortisone on course of toxoplasmosis in mice, O. Havlik, J. Hübner & M. Zastěra; Experimental toxoplasmosis in monkeys, W. Mohr, H. Wahle & A. Stammler; Pseudocysts of *Toxoplasma* in laboratory rodents, R. Lainson (4); Toxoplasmosis in rats, F. Schmidt-Hoensdorf & J. Holz; *Toxoplasma* in pulmonary infections of mice, F. Roger & P. Giroud; Toxoplasmosis in English rabbits, R. Lainson (1, 3); *Toxoplasma* in bank voles, B. Erhardova (3); Epizootic toxoplasmosis of fowls in Brazil, P. Nobrega, E. Trapp & M. Giovannoni (1); Toxoplasmosis in part-

ridges and hares of Czechoslovakia, B. Pokorny.

Protista incertae sedis.—*Pneumocystis* infection of infants, O. Jirovec (2); *Pneumocystis* causing interstitial pneumonia in infants, G. Piekarski & W. Sibbing; *Pneumocystis* infections in U.S.S.R., D. N. Zasuchin & G. D. Zasuchina; Protozoon (?) in human case of hepato-splenomegaly, A. Zlotnick.

Chemotherapy.—Drug-resistance in fowl *Eimeria* spp., A. C. Cuckler & C. M. Malanga (1); Effect of Protocid on fowl coccidia, E. Scholtyseck (2); Effect of allyl acetone on fowl *Eimeria*, W. A. Uricchio; Problems of chemotherapy of malaria, Jaswant Singh; Resistance of *Plasmodium* to pyrimethamine, R. S. Bray; T. M. Rollo; Effect of antimalarials on avian *Plasmodium*, I. Okpala & R. D. Manwell; Effect of metachloridine on *Plasmodium* of chicks kept on purified diet, D. J. Taylor & J. Greenberg (2); Effect of hypoxia on response to drugs in avian malaria, F. W. Hughes & A. L. Tatum; Effect of fumagillin on *Nosema* in bees, H. E. Cmejla, C. A. Herrick & C. L. Farrar; Effect of tetracycline on *Toxoplasma*, A. Crema & P. Gaffuri; Effect of antrycide on trypanosomes, F. Hawking & J. P. Thurston; Stilbamidine-resistance in *Trypanosoma rhodesiense*, J. D. Fulton & P. T. Grant; Acquired resistance to antrycide in cattle infected with *Trypanosoma congolense*, M. A. Soltys; Experimental chemotherapy of amoebiasis, V. D. Nosina; Effect of 8-quinalinols on *Entamoeba histolytica*, P. E. Thompson, J. W. Reinertson, A. Bayles, D. A. McCarthy & E. F. Elslager.

DISTRIBUTION

(a) GEOGRAPHICAL

General.—Distribution of deep-sea protozoa, J. L. Kulp & D. R. Carr; Geographical distribution of *Cystocephalus algerianus* var. *mauritanica*, J. Théodoridès (6).

1. Land and Freshwater.

Palaearctic Region.—Europe.—Protozoa of the Catalan coast, France C. D. Deboutteville; Plankton of Lac de Bret, F. Cosandey; Freshwater protozoa of north-east Spain, R. Margalef (2); Protozoa of a Hungarian temporary meadow pool, J. Gelei; Plankton of Lake Balaton, G. Tamás; Soil protozoa of Latvia, V. K. Egglitis; Protozoa of the Birmingham district, Anon (5); New amoebid from Scotland, C. Hayes; Thecamoeba in France, R. Thomas; New hypotrichid from France, E. Fauré-Fremiet (3); Sands ciliates in France, E. Fauré-Fremiet & M. Tuffrau; Ciliata in Italy, M. F. Canella; Rhizopoda of the River Donau, Bavaria, M. Erth; A new German peritrichid, D. Matthes (3); Rhizopoda in Czechoslovakia, M. Stěpánek (2); Testacea of Czechoslovakian rivers, M. Stěpánek (1); Dinoflagellates of Lake Balaton, O. Sebestyén; Protozoal infections of animals in Mediterranean area, J. Euzeby; Gregarines of beetles from Israel, J. Théodoridès (2).

Ethiopian Region.—Africa.—Thecamoebians from African caves, L. Declotrie.

Nearctic Region.

North America.—Folliculinids from British Columbia, E. A. Andrews (2).

United States.—Freshwater protozoa in Minnesota, G. A. Cole; Chagas' disease in U.S.A., N. C. Woody & H. B. Woody; Plankton of Colorado Lakes, R. W. Pennak;

West Indies.—New amoebid from Cuba, J. F. de la Arena.

Antarctica.—Protozoa from Tierra del Fuego, J. Frenguelli.

2. Marine.—North Temperate—North Atlantic foraminifera, F. B. Phleger, Parker & Peirson; D. B. Ericson, Ewing & Heezen; Protista of Cumbrae, Firth of Clyde, Scotland, M. R. Droop; Brackish water protista from Belgium, W. Conrad & H. Kufferath; Recent foraminifera

from Finistere, P. Lefèvre & G. Lucas ; Ciliates of Kieler Bucht, K. J. Bock ; Recent foraminifera from the Bay of Fundy, G. L. Harrington (2) ; *Globorotalia* in the North Atlantic, D. B. Ericson, Wollin & Wollin ; Brackish water foraminifera of the New York Bight, P. H. Ronai ; Protozoa of Mallorca, R. Margalef (1) ; Foraminifera of the North African coast, P. Muraour (1, 2) ; *Pebrilla paguri* (Folliculinid) in the Mediterranean, J. P. Changeux & C. D. Deboutteville ; Foraminifera from the Genoa coast, M. Giunta ; Deep-water foraminifera off Capri, M. B. Cita (1) ; New *Peridinium* from Monaco, Y. Halim ; *Epistylis* from Yugoslavia, D. Matthes (4) ; Tintinnids in the Bay of Algiers, J. Lecal ; Heterotrichid in the Bay of Algiers, M. Hamon ; New Trochamminidae from the Northern Pacific, Z. G. Shchedrina ; Radiolaria from the Bering Straits, V. V. Reshetnyak (2) ; Marine protozoa off Point Barrow, Alaska, G. S. McGinitie ; Radiolaria of the Okhotsk Sea, V. V. Reshetnyak (1) ; Foraminifera of the Californian coast, W. S. Butcher ; C. C. Church ; Plankton of Japanese coastal waters, I. Yamazi (1, 2, 3) ; I. Yamazi & T. Horibata.

Tropical.—Foraminifera of Louisiana Gulf Coast, H. V. Anderson ; Gulf of Mexico protozoa, V. Sprague ; Foraminifera of the Gulf of Mexico, F. L. Parker (1) ; F. B. Phleger & F. L. Parker ; Foraminifera of the Argentine coast, E. Boltovskoy (4) ; Benthonic foraminifera of Californian coast, W. R. Walton ; Foraminifera of the Japanese coast, M. Morishima & Chiji.

South Temperate & Subantarctic.—Foraminifera of the Argentine coast, E. Boltovskoy (1).

Antarctic.—Antarctic Suctoria collected by Swedish expedition (1901-3), C. A. Allgén.

(b) GEOLOGICAL

General.—Taxonomic, stratigraphic, and ecologic studies of foraminifera, M. F. Glaessner (2) ; Planktonic foraminifera in correla-

tion, W. H. Akers ; Value of microfossil census studies, S. P. Ellison ; Recent oolites and foraminifera, G. Lucas ; Protozoa of organic reefs, P. E. Cloud ; Foraminiferal facies in sedimentary basins, L. G. Weeks ; Brackish-water foraminifera, P. H. Ronai ; Pelagic foraminifera as indicators of depositional environment, F. D. Smith ; Foraminiferal facies in Hungary, L. Majzon (2) ; Foraminifera palaeoecology in stratigraphy, C. C. Allbritton etc. (1) ; Palaeoecology of Chalk Marl foraminifera, T. P. Burnaby ; Reworked foraminifera in Germany, H. Hagn (2) ; Foraminifera faunal breaks, O. H. Schindewolf ; Chemical composition of *Globigerina* ooze, Z. L. Sujkowskii ; Foraminiferal faunas as indicators of slumping, F. B. Phleger ; Emendation and revision of foraminifera, A. R. Loeblich & H. Tappan (2) ; Revision of some glandular Nodosariidae, A. R. Loeblich & H. Tappan (1) ; Systematic distribution of Nummulites, G. I. Nemkov ; Coiling direction of *Globorotalia* in stratigraphy, D. B. Ericson, Wollin & Wollin ; Dating vertebrate remains by protozoan content of matrices, J. Hofker (2) ; Aragonite in foraminiferal tests, J. C. Troelsen (1) ; Wall-structure of foraminifera, J. H. van Voorthuysen ; Wall-structure of Fusulinidae, M. N. Solovyeva (2) ; Tensile strength of fusulinid tests, F. Kahler ; Effect of fossilisation on foraminifera, H. Beckmann ; Secondary alteration in foraminiferal tests, R. H. Cummings (1) ; Structure of foraminiferal tests, C. Emiliani (2) ; Fossil coccoliths from the East Indies, E. Kamptner.

Primary : Cambrian foraminifera in Scandinavia, B. Waern.

Ordovician foraminifera in Russia, N. I. Rafienko.

Devonian foraminifera in Czechoslovakia, V. Pokórny (2) ; Devonian foraminifera in the U.S.S.R. S. V. Semikhatova & P. A. Menyailenko ; S. S. Kuznetsov & A. D. Miklukho-Maklai.

British Upper Palaeozoic foraminifera, R. H. Cummings (3) ; Upper

Palaeozoic foraminifera of the U.S.S.R., M. N. Solovyeva (1); O. L. Einov (2); G. D. Kireeva & L. P. Nesterenko; E. N. Larionova & T. P. Safonova; Upper Palaeozoic foraminifera in Russia, V. A. Bankovski & N. A. Redichkin, O. L. Einov (2).

Foraminiferal facies in European Carboniferous, H. Schmidt; Carboniferous foraminifera in Britain, R. H. Cummings (1, 2); Carboniferous foraminifera in Ireland, I. M. Simpson; Carboniferous foraminifera in the Ruhr, G. Kremp; Lower Carboniferous foraminifera in the Ruhr, G. Kremp; Lower Carboniferous foraminifera in the U.S.S.R., S. V. Semikhatova & P. A. Menyaïlenko; V. M. Pozner; Visean foraminifera in the U.S.S.R., O. L. Einov (1); Russian Carboniferous foraminifera, I. N. Orlova; Namurian foraminifera from the Donetz Basin, D. E. Aïsenberg & N. E. Brazhnikova; Namurian foraminifera in Russia, S. V. Semikhatova; Middle Carboniferous foraminifera in the U.S.S.R., N. A. Redichkin; Fusulinids in Central Europe, V. Kochansky-Devidé & A. Ramovs; New fusulinid of the Russian Carboniferous, M. N. Solovyeva (3); Fusulinids of the Southern Urals, A. L. Yanshin; Fusulinid zones in Russia, D. M. Rauser-Chernoussova; Permian foraminifera in the Donetz Basin, A. A. Bilik, etc.; F. E. Lapchik; I. Y. Lapkin; Permian fusulinids from the U.S.S.R., A. D. Miklukho-Maklai; Permian foraminifera in Montenegro, V. Kochansky-Devidé,

Upper Palaeozoic foraminifera in North Caucasus, E. N. Dyakonova-Savelyeva; Upper Palaeozoic foraminifera in Indochina, E. Saurin (1); Upper Palaeozoic foraminifera from Siam, K. Konishi (2); Upper Palaeozoic foraminifera from Japan, K. Kanmera (1); Carboniferous foraminifera in Japan, K. Kanmera (3); Carboniferous and Permian foraminifera in North Vietnam, E. Saurin (2); Carboniferous foraminifera from Manchuria, H. Yabe & M. Eguchi; Permian foraminifera in Japan, K. Konishi (1); H. Morita; Permian fusulinids in

Japan, R. Torijama (1); New Permian fusulinids from Japan, R. Morikawa (4); Fusulinids from Japan, J. Arai, etc.; R. Endo; T. Chizaka; H. Fujimoto; H. Fujimoto & S. Kawada; I. Hayasaka & H. Matsuo; K. Kanmera (2); S. Kanuma; S. Kawada & H. Fujimoto; R. Morikawa (1, 2, 3); S. Shikanuma; R. Toriyama (2, 3); Fusulinids in Japan, N. Tamura, T. Sato & N. Toyama; Y. Takaoka; S. Takano; T. Takano; R. Toriyama & R. Choh; Fusulinids in Japan, T. P. Yen, C. C. Sheng & W. P. Keng.

Fusulinids in Japan, H. Yamada, H. Fujimoto & S. Yoshida; Fusulinids in Californian Permian, J. P. Albers & J. F. Robertson; Carboniferous foraminifera from Ohio, M. F. Marple; Fusulinids in Oklahoma, R. D. Alexander; Fusulinids from Utah, H. J. Bissell; Pennsylvanian-Permian fusulinids in Idaho, D. A. Bostwick; Permo-Carboniferous foraminifera of Colorado and New Mexico, K. G. Brill; Fusulinids in American Wolfcampian, M. L. Thompson; Pennsylvanian foraminifera in Texas, R. H. J. Elliott & O. J. Kim; Permian fusulinids in Texas, J. W. Skinner & G. L. Wilde; Pennsylvanian foraminifera in Kansas, W. Lebsack; Fusulinids in Kansas, H. G. O'Connor & J. M. Jewett.

Permian fusulinids in New Zealand, N. de B. Hornbrook (1); Range of *Neoschwagerina syrtalis*, R. Ciry; Pennsylvanian foraminifera in limestones, J. H. Johnson; Evolution of the Fusulinidae, D. M. Rauser-Chernoussova & S. E. Rozovskaya.

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\dagger *Allomorphina*; status thereof, J. C. Troelsen (2); \dagger *A. aguafrescaensis* sp. n. (p. 25), Eocene, Chile, R. Todd & H. I. Kniker.

\dagger *Alveolina delicatissima* sp. n. (p. 73); Lower Tertiary, Qatar, A. H. Smout (1).

\dagger *Ammobaculites akabiraensis* sp. n. (p. 48), Upper Eocene, Japan, K. Asano (5); \dagger *A. albertensis* var. n. *hinesensis* (p. 30); *A. gravenoi* sp. n. (p. 30); *A. spiriferensis* sp. n. (p. 33); Cenomanian, Canada, C. R. Stelck & J. H. Wall; \dagger *A. godmani* nom. n. (p. 53) Barnard [for *A. minuta* Barnard 1953 (*non* Waters 1927)], H. E. Thalmann (1); \dagger *A. humboldti* var. n. *sellii* (p. 106), Oligocene, Italy, C. Emiliani (1).

\dagger *Ammodiscus gryzbowski* sp. n. (p. 106) Oligocene, Italy, C. Emiliani (1).

\dagger ? *Ammomarginulina krachemensis* sp. n. (p. 480), Senonian, Algeria, G. Cheylan, Magné, Sigal & Grekoff; \dagger *A. lorangerae* sp. n. (p. 34) Cenomanian, Canada, C. R. Stelck & J. H. Wall.

\dagger *Amphistegina abrardi* sp. n. (p. 51) Eocene, France, Y. Le Calvez.

\dagger *Angulogerina cushmani* sp. n. (p. 23), Eocene, Chile, R. Todd & H. I. Kniker.

\dagger *Anomalina asanoi* sp. n. (p. 96) Miocene, Japan, S. Murata (1); \dagger *A. aumalensis* sp. n. (p. 27), Cretaceous, Algeria, J. Sigal (1); \dagger *A. chileana* sp. n. (p. 27), Eocene, Chile, R. Todd & H. I. Kniker; \dagger *A. etrusca* sp. n. (p. 109) Oligocene, Italy, C. Emiliani (1); \dagger *A. fayoumensis* sp. n. (p. 123) Upper Eocene, Egypt, S. E. Ansary; \dagger *A. pompilioides* var. n. *semicirrata* (p. 400), Eo-Oligocene, Barbados, J. P. Beckmann.

\dagger *Archaeocyclus mid-orientalis* sp. n. (p. 510) Cretaceous, Middle East, F. E. Eames & A. H. Smout.

\dagger *Armenina* gen. n. *karinae* sp. n. (p. 576) (genotype) Lower Permian, U.S.S.R., A. D. Miklukho-Maklai.

\dagger *Astacolus skyringensis* sp. n. (p. 14), Eocene, Chile, R. Todd & H. I. Kniker; \dagger *A. peruvianus* sp. n. (p. 10), Paleocene, Peru, L. Weiss (2).

\dagger *Asterigerina dukhani* sp. n. (p. 81) Lower Tertiary, Qatar, A. H. Smout (1).

Auerinella gen. n. *fuegiae* sp. n. (p. 46), Recent, Tierra del Fuego, J. Frenguelli.

\dagger *Baculogypsina*; systematics thereof, S. Hanzawa (1).

\dagger *Baggatella altuviscula*, *divulgata*, *latiaperta*, spp. n. (p. 606), [nom. nud.] Tertiary, Poland, N. N. Subbotina, V. V. Glushko, & L. S. Pishvanova.

\dagger *Baggina notoensis* sp. n. (p. 10), Miocene, Japan, K. Asano (3).

\dagger *Bifarina tonohamaensis* sp. n. (p. 32) Tertiary, Japan, Y. Takayanagi (2).

\dagger *Birbalina* gen. n. *pulchra* sp. n. (p. 187) [nom. nud.] ? Cretaceous, India, M. R. Sahni.

\dagger *Boultonia*; systematics thereof, K. Konishi (2); \dagger *B. heezeni* sp. n. (p. 32) [authorship to Thompson & Hansen] Wolfcampian, U.S.A., M. L. Thompson; \dagger *B. truncata* sp. n. (p. 107), Upper Palaeozoic, Siam, K. Konishi (2).

\dagger *Bolivina angusta*, *subdilata*, sp. n. (p. 606) [nom. nud.] Tertiary, Poland, N. N. Subbotina, V. V. Glushko & L. S. Pishvanova; *B. cuomi* sp. n. (p. 196), Recent, Argentine coast, E. Boltovskoy (1); \dagger *B. daggaricus* nom. n. (p. 52) [for *Bolivina lanceolata* Parker 1954 (*non* Alliata 1952)], F. L. Parker (2); \dagger *B. firma* sp. n. (p. 72) Cretaceous, Holland, J. Hofker (3); \dagger *B. marginata* subsp. n. *masudai* (p. 10) Miocene Japan, K. Asano (3); *B. petterssoni* sp. n. (p. 36), North Atlantic, F. B. Phleger, Parker & Peirson; \dagger *B. villaevniensis* sp. n. (p. 174), Pliocene, Italy, B. Martinis (2); \dagger *B. yabei* sp. n. (p. 31) Tertiary, Japan, Y. Takayanagi (2).

\dagger *Brotzenia* gen. n. (p. 169) (genotype *Epistomina spinulifera* Reuss); *B. parastelligera* sp. n. (p. 180); J. Hofker (1).

\dagger *Bulimina aguafrescaensis* sp. n. (p. 22), Eocene, Chile, R. Todd & H. I. Kniker; \dagger *B. arndti* sp. n. (p. 168), Oligocene, Bavaria, H. Hagn & O. Hözl (1); \dagger *B. crenata, virguliniformis, fissura* spp. n. (p. 14) Paleocene Peru, L. Weiss (2); \dagger *B. jarvisi* var. n. *misrensis* (p. 88) Upper Eocene, Egypt, S. E. Ansary; *B. kochiensis* (p. 31) Tertiary, Japan, Y. Takayanagi (2); \dagger *B. simplex* var. n. *colwellensis* (p. 680), Eocene, England, S. B. Bhatia; \dagger *B. striata* subsp. n. *notoensis* (p. 11), Miocene, Japan, K. Asano (3); *B. translucens* sp. n. (p. 33), North Atlantic, F. B. Phleger, Parker & Peirson; \dagger *B. wyomingensis* sp. n. (p. 118) Cretaceous, Wyoming, S. K. Fox.

\dagger *Buliminella apenninica* sp. n. (p. 113) Oligocene, Italy, C. Emiliani (1); \dagger *B. carteri* sp. n. (p. 678), Eocene, England, S. B. Bhatia.

\dagger *Camerina saipanensis* sp. n. (p. 20) Eocene, Saipan, W. S. Cole & J. Bridge.

\dagger *Carterina*, emendation thereof, (p. 27), A. R. Loeblich & H. Tappan (2).

\dagger *Carterinidae* fam. n. (p. 27), A. R. Loeblich & H. Tappan (2).

\dagger *Cassidulina kattoi* sp. n. (p. 34) Tertiary, Japan, Y. Takayanagi (2).

\dagger *Cassidulinoides bodeni* sp. n. (p. 181), Oligocene, Bavaria, H. Hagn & O. Hözl (1).

\dagger *Caucasina tenebricosa* sp. n. (p. 606) [nom. nud.] Tertiary, Poland, N. N. Subbotina, V. V. Glushko, & L. S. Pishvanova.

\dagger *Ceratobulimina*; status thereof, J. C. Troelsen (2); \dagger *C. cheylani* sp. n. (p. 486), Miocene, Algeria, G. Cheylan, Magné, Sigal & Grekoff.

\dagger *Chilostomella polsoni* sp. n. (p. 17), Paleocene, Peru, L. Weiss (2).

\dagger *Choffatella sogamozae* (Karsten) Petters 1954; status thereof, W.

Maync (5); \dagger *C. stenzeli* Stead 1951; status thereof, W. Maync (5); \dagger *C. zireggensis* sp.n. (p. 12) Cretaceous. Algeria, J. Sigal (1); \dagger *C. zireggensis* Sigal 1952; validity thereof, W. Maync (5).

\dagger *Cibicides djaffaensis* sp. n. (p. 14) Cretaceous, Algeria, J. Sigal (1); *C. kullenbergi* sp. n. (p. 49), North Atlantic, F. B. Phleger, Parker & Peirson; \dagger *C. micrus* var. n. *pusillus* (p. 250), Eocene, Italy, F. P. Decima & F. Ferasin; \dagger *C. ungerianus* (d'Orbigny) var. n. *filicosta* (p. 186), Oligocene, Bavaria, H. Hagn & O. Hözl (1); \dagger *C. yabei* sp. n. (p. 43) Paleogene, Japan, K. Asano (1).

\dagger *Clavulinina auriculostoma* sp. n. (p. 16), Eocene, France, Y. Le Calvez.

\dagger *Clavulinoides chileana, brunswickensis* spp. n. (p. 11), Eocene, Chile, R. Todd & H. I. Kniker.

\dagger *Codonofusiella extensa* sp. n. (p. 930), Permian, West Texas, J. W. Skinner & G. L. Wilde.

\dagger *Colomia orthostoma* sp. n. (p. 225), Cretaceous, Bavaria, I. de Klasz (1).

\dagger *Cornuspira cushmani* sp. n. (p. 13) Eocene, Chile, R. Todd & H. I. Kniker.

\dagger *Corrosina* gen. n. (p. 68) *pupoides* sp. n. (p. 69) Oligocene, Hungary, R. M. Nyirö.

\dagger *Coskinolina sunnilandensis* sp. n. (p. 106), Lower Cretaceous, Venezuela W. Maync (3).

\dagger *Crespinina* gen. n., (p. 45) *kingscotensis* sp. n. (p. 46) (genotype), Tertiary, Australia, M. Wade.

\dagger *Crstellaria ouachensis* sp. n. (p. 16) Cretaceous, Algeria, J. Sigal (1).

\dagger *Cyclammina apenninica* sp. n. (p. 117) Oligocene, Italy, C. Emiliani (1); \dagger *C. japonica* subsp. n. *kaiensis* (p. 202), Miocene, Japan, O. Fukuda & R. Shinogi.

\dagger *Dagmarella* gen. n. (p. 945) *prima* sp. n. (p. 946) (genotype) Carboniferous, Russia, M. N. Solovyeva (3).

\dagger *Darbyella argentinensis* sp. n. (p. 144) Argentine coast, Recent, E. Boltovskoy (1); \dagger *D. tosaensis* sp.n.

(p. 29), Tertiary, Japan, Y. Takanagi (2).

†*Daviesina* gen. n. (p. 66) *khatiyahi* sp. n. (p. 67) (genotype); *D. langhami* sp. n. (p. 68); *D. danieli* sp. n. (p. 69); Lower Tertiary, Qatar, A. H. Smout (1).

†*Dentalina bighornensis* sp. n. (p. 116) Cretaceous, Wyoming, S. K. Fox; †*D. cineraria* sp. n. (p. 119), Oligocene, Italy, C. Emiliani (1); †*D. elganoensis* sp. n. (p. 15); *D. patagonica* sp. n. (p. 16), Eocene, Chile, R. Todd & H. I. Kniker.

†*Dictyoconus mosae* sp. n. (p. 115) Cretaceous, Holland, J. Hofker (3); †*D. walutensis* (Carsey); systematics thereof, W. Maync (2).

†*Dictyokathina* gen. n. (p. 64) *simplex* sp. n. (p. 65) (eugenotype); Lower Tertiary, Qatar, A. H. Smout (1).

†*Discopulvinulina cushmani* nom. n. (p. 128) (for *Hanzawaia concentrica* (Cushman)), J. Hofker (4).

†*Discorbis bembidgensis* sp. n. (p. 682), Eocene, England, S. B. Bhatia; †*D. djaffaensis* sp. n. (p. 17) Cretaceous, Algeria, J. Sigal (1); †*D. herouvalensis* sp. n. (p. 506), Eocene, France, Y. Le Calvez & L. Feugueur; *D. laquei* sp. n. (p. 375), Californian coast, C. C. Church.

†*Dorothia*; status thereof, R. N. C. Bowen (3); †*D. ashiyaensis* sp. n. (p. 61) Palaeogene, Japan, S. Murata (7); †*D. kaskapauensis* sp. n. (p. 36); *D. k.* var. n. *gracilis* (p. 37) Cenomanian, Canada, C. R. Stelck & J. H. Wall; †*D. pupa* (Reuss, 1860) var. *britannica* nom. n. (p. 53) Barnard & Banner [for *D. p.* (Reuss, 1860) var. *tenuis* Barnard & Banner 1953 (*non D. tenuis* Bermudez 1949)], H. E. Thalmann (1); †*D. vulsa* sp. n. (p. 120), Oligocene, Italy, C. Emiliani (1).

†*Dunbarinella fivensis* sp. n. (p. 44); *D. americana* sp. n. (p. 45); *D. eoextenta* sp. n. (p. 46); *D. extenta* sp. n. (p. 47); *D. hughesensis*, *glenensis* spp. n. (p. 48); *D. wetherensis* sp. n. (p. 49); Wolfcampian, U.S.A. M. L. Thompson.

†*Earlandia pulchra* sp. n. (p. 228) Carboniferous, Scotland, R. H. Cummings (1).

†*Earlandiidae* fam. n. (p. 227), Palaeozoic, R. H. Cummings (1).

†*Earlandinella* gen. n. (p. 229) (genotype *Nodosinella cylindrica* Brady 1876) Carboniferous, Britain, R. H. Cummings (1).

†*Earlandinita* gen. n. (p. 230) (genotype *Nodosinella perelegans* Plummer 1930) Carboniferous, R. H. Cummings (1).

†*Eggerella pulcherella* sp. n. (p. 248) Eocene, Italy, F. P. Decima & F. Ferasin; †*E. mystica* sp. n. (p. 121), Oligocene, Italy, C. Emiliani (1).

†*Ehrenbergina insueta* sp. n. (p. 249) Eocene, Italy, F. P. Decima & F. Ferasin; *E. undulata* sp. n. (p. 46), North Atlantic, F. B. Phleger, Parker, & Peirson.

†*Elphidiella multiscissurata* sp. n. (p. 208) Cretaceous, Arabia, A. H. Smout (2).

†*Elphidium* (?) *ellisi* sp. n. (p. 159), Pleistocene, New York, L. Weiss (1); †*E. hiltermanni* sp. n. (p. 163), Oligocene, Bavaria, H. Hagn & O. Hözl (1); †*E. koberi* sp. n. (p. 198), Tortonian, Austria, A. Tollmann (1); †*E. morenoi* subsp. n. *ameghinoi* (p. 277), Recent, Argentina, E. Boltovskoy (2); †*E. skyringense*, *patagonicum* spp. n. (p. 18); *E. aquafrescense*, *chilenum*, *lauritaense* spp. n. (p. 19); Eocene, Chile, R. Todd & H. I. Kniker; †*E. ? toddae* nom. n. (p. 82) Petri [for *Elphidium*? *limbatum* Petri 1954], H. E. Thalmann (2).

†*Enantiomarginulina similis* sp. n. (p. 340); *E. enigmata* sp. n. (p. 341), Cretaceous, Texas, F. J. Bullard.

†*Endothyranopsis* gen. n. (p. 1). [genotype *Involutina crassa* Brady 1869], Lower Carboniferous, Britain, R. H. Cummings (2).

†*Entosolenia fukamiensis* sp. n. (p. 12) Miocene, Japan, K. Asano (3); †*E. tokaoi* sp. n. (p. 48) Miocene, Japan, K. Asano (2).

†*Eofabiana* gen. n. (p. 135) *grahami* sp. n. (p. 136) (genotype), Eocene, Venezuela, K. Küpper (2).

†*Epistomariidae*; revision thereof, J. Hofker (1).

\dagger *Epistomina auresensis* sp. n. (p. 8)
Cretaceous, Algeria, J. Sigal (1);
 \dagger *E. djaffaensis* sp. n. (p. 14) Cretaceous, Algeria, J. Sigal (1); \dagger *E. nuda* var. n. *vulgaris* (p. 199); *E. stellicostata* sp. n. (p. 200); *E. S. var. n. granulosa* (p. 200); Jurassic, Poland, W. Bielecka & W. Pozaryski.

Epistominella vitrea sp. n. (p. 9), Gulf of Mexico, F. L. Parker (1).

\dagger *Eponides gaviotaensis* sp. n. (p. 143) Oligocene, California, E. J. Wilson; \dagger *E. involuta* sp. n. (p. 115) Cretaceous, Holland, J. Hofker (3); *E. peruvianus* subsp. n. *campsi* (p. 205), Recent, Argentine coast, E. Boltovskoy (1); \dagger *E. shoshonensis* sp. n. (p. 119) Cretaceous, Wyoming, S. K. Fox; \dagger *E. (Conorbis) polonicus* sp. n. (p. 198); Jurassic, Poland, W. Bielecka & W. Pozaryski; \dagger *E. marcida* sp. n. (p. 124), Oligocene, Italy, C. Emiliani (1).

\dagger *Fabiania saipanensis* sp. n. (p. 28) Eocene, Saipan, W. S. Cole & J. Bridge.

\dagger *Fissoelphidium* gen. n. (p. 208) *operculiferum* sp. n. (p. 209) [genotype] Cretaceous, Arabia, A. H. Smout (2).

\dagger *Fissurina latemarginata* sp. n. (p. 227), Cretaceous, Bavaria, I. de Klasz (1).

\dagger *Flabellamina irenensis* sp. n. (p. 38); *F. kaskapauensis* sp. n. (p. 39); *F. warreni* sp. n. (p. 40); *F. webbi* sp. n. (p. 41) Cenomanian, Canada, C. R. Stelck & J. H. Wall.

\dagger *Flabellina gahannamensis* sp. n. (p. 28), Upper Eocene, Egypt, S. E. Ansary.

\dagger *Flintina subglobosa* sp. n. (p. 27) Tertiary, Japan, Y. Takayanagi (2).

\dagger *Fourstonella* gen. n. (p. 6) [genotype *Stacheia fusiformis* Brady 1876], Lower Carboniferous, Britain, R. H. Cummings (2).

\dagger *Frankeina kimeridensis* sp. n. (p. 162), Jurassic, Poland, W. Bielecka & W. Pozaryski.

\dagger *Frondicularia delfaensis* sp. n. (p. 40), Cretaceous, Algeria, J. Sigal (1); \dagger *F. greybullensis* sp. n. (p. 118) Cretaceous, Wyoming, S. K. Fox;

\dagger *F. notoensis* sp. n. (p. 12), Miocene, Japan, K. Asano (3); \dagger *F. schaffeni* sp. n. (p. 27), Oligocene, Germany, H. Friese; \dagger *F. tosaensis* sp. n. (p. 29) Tertiary, Japan, Y. Takayanagi (2); \dagger *Frondicularia paleogredensis* sp. n. (p. 11), Paleocene, Peru, L. Weiss (2).

\dagger *Fusulina akiyoshiensis* sp. n. (p. 49) [nom. nud.], Upper Palaeozoic, Japan, R. Toriyama (2); \dagger *F. attenuata* sp. n. (p. 23); *F. equabilis* sp. n. (p. 24); *F. equilaqueata* sp. n. (p. 26); *F. expedita* sp. n. (p. 27); *F. occultifrons* sp. n. (p. 40); *F. plena* sp. n. (p. 41); *F. tumida* sp. n. (p. 43), Carboniferous. Oklahoma, R. D. Alexander.

\dagger *Fusulinella derelicta* sp. n. (p. 16), Upper Palaeozoic, Indochina, E. Saurin (1); \dagger *F. subspherica* sp. n. (p. 49) [nom. nud.] Upper Palaeozoic Japan, R. Toriyama (2).

\dagger *Fusulinidae*; systematics thereof, D. M. Rauser-Chernoussova & S. E. Rozovskaya.

\dagger *Gaudryina*; emendation thereof, R. N. C. Bowen (3); \dagger *G. ashiyaensis* sp. n. (p. 61) Palaeogene, Japan, S. Murata (7); \dagger *G. chettabaensis* sp. n. (p. 11) Cretaceous, Algeria, J. Sigal (1); \dagger *G. chileana*, *brunswickensis* spp. n. (p. 10), Eocene, Chile, R. Todd & H. I. Kniker; \dagger *G. cobbani* sp. n. (p. 112) Cretaceous, Wyoming, S. K. Fox; \dagger *G. irenensis* sp. n. (p. 42); *G. spiritensis* sp. n. (p. 43); Cenomanian, Canada, C. R. Stelck & J. H. Wall.

\dagger *Gavelinella umbilicatiformis* sp. n. (p. 120) Cretaceous, Holland, J. Hofker (3).

\dagger *Globalterina globoloculata* sp. n. (p. 606) [nom. nud.] Tertiary, Poland, N. N. Subbotina, V. V. Glushko & L. S. Pishvanova.

\dagger *Globigerina brevispira*, *pseudoedita* spp. n. (p. 606) [nom. nud.] Tertiary Poland, N. N. Subbotina, V. V. Glushko, & L. S. Pishvanova; \dagger *G. druryi* sp. n. (p. 654), Miocene, Louisiana, W. H. Akers; \dagger *G. paradubia*, *aumalensis* spp. n. (p. 28), Cretaceous, Algeria, J. Sigal (1); \dagger *G. patagonica* sp. n. (p. 26), Eocene, Chile, R. Todd & H. I. Kniker; \dagger *G.*

stonei sp. n. (p. 18), Paleocene, Peru, L. Weiss (2).

†*Globigerinella aissana* sp. n. (p. 28) Cretaceous, Algeria, J. Sigal (1); †*G. evoluta, praemicra* spp. n. (p. 606) [nom. nud.] Tertiary, Poland, N. N. Subbotina, V. V. Glushko & L. S. Pishvanova.

†*Globigerinella incrusta* sp. n. (p. 655), Miocene, Louisiana, W. H. Akers.

†*Globogaudrina larmeui, obesa* spp. n. (p. 661) Miocene, Louisiana, W. H. Akers.

†*Globorotalia canariensis* var. n. *minima* (p. 659), Miocene, Louisiana, W. H. Akers; †*G. (Truncorotalia) mosae* sp. n. (p. 99), Cretaceous, Holland, J. Hofker (3); †*G. (?) youngi* sp. n. (p. 119) Cretaceous, Wyoming, S. K. Fox; †*Globorotalia whitei* sp. n. (p. 18), Paleocene, Peru, L. Weiss (2).

†*Globorotalites ouachensis, djaffaeensis* spp. n. (p. 19), Cretaceous, Algeria, J. Sigal (1).

†*Globotruncana*; systematics thereof, F. Dalbiez; †*G. andori* sp. n. (p. 233), Cretaceous, Bavaria, I. de Klasz (1); †*G. lobata* sp. n. (p. 43), Cretaceous, Bavaria, I. de Klasz (3); †*G. schneegansi* sp. n. (p. 33); *G. asymmetrica* sp. n. (p. 35); *G. lamellosa* sp. n. (p. 42); *G. falsostuarti* sp. n. (p. 43); Cretaceous, Algeria, J. Sigal (1); †*G. (Globotruncana) ventricosa* subsp. n. *primitiva, carinata* (p. 168) *G. (G.) v.* subsp. b. *stuartiformis* (p. 169); Cretaceous, Tunisia, F. Dalbiez.

†*Globulina fistulosa* sp. n. (p. 342); *G. immobilis* sp. n. (p. 343); Cretaceous, Texas, F. J. Bullard.

†*Glomospira charoides* var. n. *extends* (p. 133); *G. favilla* sp. n. (p. 133), Oligocene, Italy, C. Emiliani (1).

†*Gubkinella* gen. n. *asiatica* sp. n. (p. 623) Senonian, Russia, I. S. Suleimanov.

†*Gublerina acuta* sp. n. (p. 246); *G. a.* subsp. n. *robusta* (p. 247); Cretaceous, Bavaria, I. de Klasz (2).

†*Gümbelina barnardi* sp. n. (p. 77), Upper Eocene, Egypt, S. E. Ansary;

†*G. dagmarae* sp. n. (p. 624), Senonian Russia, I. S. Suleimanov; †*G. deflaensis* sp. n. (p. 36), Cretaceous Algeria, J. Sigal (1).

†*Gümbelitria oveyi* sp. n. (p. 79) Upper Eocene, Egypt, S. E. Ansary.

†*Guttulina expolita* sp. n. (p. 341), Cretaceous, Texas, F. J. Bullard.

†*Gyroidina barbarica, gothica* spp. n. (p. 135); *G. medicea* sp. n. (p. 136), Oligocene, Italy, C. Emiliani (1); †*G. depressa* subsp. n. *parvula* (p. 16); Paleocene, Peru, L. Weiss (2); †*G. aegyptiaca* sp. n. (p. 106) Upper Eocene, Egypt, S. E. Ansary.

†*Hanzawaia*; status thereof, J. Hofker (4).

†*Haplophragmoides carlilensis* sp. n. (p. 110) Cretaceous, Wyoming, S. K. Fox; †*H. chilenum* sp. n. (p. 6) Eocene, Chile, R. Todd & H. I. Kniker; †*H. collyra* var. n. *bahani* (p. 45); *H. c.* var. n. *bullocki* (p. 46); *H. crickmayi* sp. n. (p. 47); *H. eocalcula* sp. n. (p. 49); *H. neolinkii* sp. n. (p. 50); *H. pacalis* sp. n. (p. 51) Cenomanian, Canada, C. R. Stelck & J. H. Wall; †*H. etrusca* sp. n. (p. 139), Oligocene, Italy, C. Emiliani (1).

†*Hastigerinella simplicissima* sp. n. (p. 487), Cretaceous, Algeria, G. Cheylan, Magné, Sigal & Grekoff.

†*Heronallenia stellata* sp. n. (p. 32), Tertiary, Japan, Y. Takayanagi (2).

†*Heterostegina saipanensis* sp. n. (p. 23) Eocene, Saipon, W. S. Cole & J. Bridge.

†*Heterostomella chettabaensis* sp. n. (p. 11) Cretaceous, Algeria, J. Sigal (1).

†*Hiltermannia* gen. n. (p. 169) (genotype *Epistomina chapmani* Ten Dam), J. Hofker (1).

†*Höglundina rupeliensis* sp. n. (p. 199) (Eocene); *H. minimalis* sp. n. (p. 200) (Oligocene); *H. miocenica* (p. 200) (Miocene), *H. mediterranea* sp. n. (p. 202) (Recent); J. Hofker (1).

†*Hopkinsina bortotara* var. n. *aegyptiaca* (p. 91) Upper Eocene, Egypt, S. E. Ansary.

†*Hukawngia* gen. n. (p. 384) *problematica* sp. n. (p. 385) (genotype) Cretaceous, Burma, M. R. Sahni & V. V. Sastri.

†*Hyperammina*; status thereof, R. H. Cummings (1); †*H. pristis* sp. n. (p. 143), Oligocene, Italy, C. Emiliiani (1).

†*Hyperamminoides*; status thereof, R. H. Cummings (1).

Involvohauerina gen. n. (p. 14) *globularis* sp. n. (p. 15) (genotype) Recent, A. R. Loeblich & H. Tappan (2).

†*Irrawaddia* gen. n. *trigonalis* sp. n. (p. 384) (genotype), Burma; *I. tibetica* sp. n. (p. 385), Tibet; both Cretaceous, M. R. Sahni & V. V. Sastri.

†*Irregularina granda* sp. n. (p. 891) [nom. nud.] Devonian, U.S.S.R., S. S. Kuznetsov & A. D. Miklukho-Maklai.

†*Karreriella marina* sp. n. (p. 248); *K. termalis* sp. n. (p. 249); Eocene, Italy, F. P. Decima & F. Ferasin; †*K. siphonella* (Reuss) var. n. *exilis* (p. 139), Oligocene, Bavaria, H. Hagn & O. Hözl (1).

†*Kathina* gen. n. *delseota* sp. n. (p. 61) (genotype); *K. selveri* sp. n. (p. 62); *K. major* sp. n. (p. 63); Lower Tertiary, Qatar, A. H. Smout (1).

†*Kettnerammina* gen. n. (p. 3) *givetiana* sp. n. (p. 4) (genotype); *K. (?) mesodevonica* sp. n. (p. 5); Devonian, Czechoslovakia, V. Pokorný (2).

†*Kutaungia* gen. n. *cretacea* sp. n. (p. 384) (genotype) Cretaceous, Burma, M. R. Sahni & V. V. Sastri.

†*Kyatsokia* gen. n. *tibetica* sp. n. (p. 385) (genotype); *K. multilocularis* sp. n. (p. 386); Cretaceous, Tibet, M. R. Sahni & V. V. Sastri.

†*Lagena terquemi* nom. n. (p. 38) [for *Lagena histrix* Terquem 1882], Eocene, France, Y. Le Calvez.

†*Lagenammina minima* sp. n. (p. 891) [nom. nud.] Devonian, U.S.S.R. S. S. Kuznetsov & A. D. Miklukho-Maklai.

†*Lagenonodosaria scalaris* (Butsch) var. n. *cuneensis* (p. 171), Pliocene, Italy, B. Martinis (2).

†*Lamarckinita* nom. n. (p. 119) [for *Ruttenella* Keyzer 1953 (*non* van den Bold 1946)] Mio-Pliocene, Indonesia, F. G. Keyzer.

†*Lenticulina vistulae* sp. n. (p. 167); *L. v.* var. n. *elongata* (p. 168); Jurassic, Poland, W. Bielecka & W. Pozaryski.

†*Lepidocyclus* (*Eulepidina*) *bridgei* sp. n. (p. 34); *L. (E.) saipanensis* sp. n. (p. 37); Miocene, Saipan, W. S. Cole & J. Bridge.

†*Lepidolina* ? *gigantea* sp. n. (p. 181), Permian, Japan, R. Toriyama (3).

†*Lingulina*; review thereof, A. Tollmann (2); †*L. costata* subsp. n. *tricarinata* (p. 611); *L. c.* subsp. n. *cylindrica* (p. 612); *L. levii* sp. n. (p. 614); Miocene, Austria, A. Tollmann (2); †*L. fugoshiensis* sp. n. (p. 12) Miocene, Japan, K. Asano (3).

†*Lingulinopsis*; review thereof, A. Tollmann (2); †*L. koberi* sp. n. (p. 617) Miocene, Austria, A. Tollmann (2).

†*Lockhartia prehaimei*, *altispira* spp. n. (p. 51); *L. diversa* sp. n. (p. 52); *L. conica* sp. n. (p. 53); *L. huntii* var. n. *pustulosa* (p. 54); Lower Tertiary, Qatar, A. H. Smout (1).

†*Loeblichia* gen. n. (p. 3) [*genotype Endothyra ammonoides* Brady 1873] Lower Carboniferous, Britain, R. H. Cummings (2).

†*Loeblichinae* subfam. n. (p. 3), Lower Carboniferous, Britain, R. H. Cummings (2).

†*Loxostomum burgeri* sp. n. (p. 485) Miocene, Algeria, G. Cheylan, Magné, Sigal & Grekoff; †*L. chalkophilum* sp. n. (p. 172), Oligocene, Bavaria, H. Hagn & O. Hözl (1); †*L. ozawai* sp. n. (p. 32) Tertiary, Japan, Y. Takayanagi (2).

†*Lugtonia* gen. n. (p. 321) (genotype *Nodosinella concinna* Brady 1876); *L. minima* sp. n. (p. 232); *L. inflata*, *elongata* spp. n. (p. 233);

Carboniferous, Britain, R. H. Cummings (1).

\dagger *Marginulina adunca* subsp. n. *aguilina* (p. 10), Paleocene, Peru, L. Weiss (2); \dagger *M. ashiyaensis* sp. n. (p. 61) Palaeogene, Japan, S. Murata (7); \dagger *M. buskensis* sp. n. (p. 186); Jurassic, Poland, W. Bielecka & W. Pozaryski; \dagger *M. masudai* sp. n. (p. 12), Miocene, Japan, K. Asano (3); \dagger *M. nuttalli* nom. n. (p. 14) (for *Cristellaria sublitus* Nuttall 1932), Eocene, Chile, R. Todd & H. I. Kniker.

\dagger *Marginulinopsis djaffaensis* sp. n. (p. 15) Cretaceous, Algeria, J. Sigal (1).

\dagger *Marssonella ouachensis* sp. n. (p. 19), Cretaceous, Algeria, J. Sigal (1).

Massilina protea sp. n. (p. 10), Gulf of Mexico, F. L. Parker (1).

\dagger *Meandrospira djaffaensis* sp. n. (p. 17) Cretaceous, Algeria, J. Sigal (1).

\dagger *Mesania* gen. n. *vermiforme* sp. n. (p. 385) (genotype) Cretaceous, Burma; *M. kutauengensis* sp. n. (p. 385) Cretaceous, Burma; *M. tibetica* sp. n. (p. 385) Cretaceous, Tibet; M. R. Sahni & V. V. Sastri.

\dagger *Miliammina*; emendation thereof (p. 12), A. R. Loeblich & H. Tappan (2).

\dagger *Millerella japonica* sp. n. (p. 170); *M. gigantea* sp. n. (p. 172); Carboniferous, Japan, K. Kanmera (3).

\dagger *Miscellanea miscella* var. n. *dukhani* (p. 73); Lower Tertiary, Qatar, A. H. Smout (1).

\dagger *Moravammina* gen. n. (p. 7) *segmentata* sp. n. (p. 8) (genotype) Devonian, Czechoslovakia, V. Pokorný (2).

\dagger *Moravammininae* subfam. n. (p. 7), Devonian, Czechoslovakia, V. Pokorný (2).

\dagger *Nankinella nagatoensis* sp. n. (p. 53) [nom. nud.], Upper Palaeozoic, Japan, R. Toriyama (2).

\dagger *Neobulimina varsoviensis* sp. n. (p. 194); Jurassic, Poland, W. Bielecka & W. Pozaryski.

\dagger *Neoschwagerina caucasica* sp. n. (p. 138) [authorship to Dutkevich]; *N. djakonowae* sp. n. (p. 142); Upper Palaeozoic, Caucasus, E. N. Dyakonova-Savelyeva.

\dagger *Nodosaria cornus* nom. n. (p. 147) (for *N. corniculum* Costa 1856), Oligocene, Italy, C. Emiliani (1); \dagger *N. notoensis* sp. n. (p. 13) Miocene, Japan, K. Asano (3); \dagger *N. subcanaliculata* (Neugeboren) var. *neospinescens* nom. n. (p. 120) [for *N. s.* (Neugeboren) var. *spinescens* Bowen 1954], Eocene, England, R. N. C. Bowen (2).

\dagger *Nodosinella*; emendation thereof, R. H. Cummings (1).

\dagger *Nodosinellidae*; emendation thereof, R. H. Cummings (1).

\dagger *Nonion fayoumensis* sp. n. (p. 68); *N. maadiensis* sp. n. (p. 69); *N. trompi* sp. n. (p. 73); Upper Eocene, Egypt, S. E. Ansary; \dagger *N. laeve* var. n. *subexcavatum* (p. 678) Eocene, England, S. B. Bhatia; \dagger *N. pauciloculatum* subsp. n. *albiumbilicatum* (p. 157) Pleistocene, New York, L. Weiss (1).

\dagger *Nonionella laffitei* sp. n. (p. 483), Miocene, Algeria, G. Cheylan, Magné, Sigal & Grekoff; \dagger *N. liebusi* sp. n. (p. 161), Oligocene, Bavaria, H. Hagn & O. Hözl (1); *N. miocenica* subsp. n. *gagarini* (p. 169), Recent, Argentine coast, E. Boltovskoy (1).

\dagger *Nubecularia mazoviensis* sp. n. (p. 163), Jurassic, Poland, W. Bielecka & W. Pozaryski.

\dagger *Nummulites*; systematics thereof G. I. Nemkov.

\dagger *Oinomikadoina* gen. n. (p. 163) *ogiensis* sp. n. (p. 163) (genotype), Pliocene, Japan, T. Matsunaga.

\dagger *Oketaella waldripensis* sp. n. (p. 35) *O. campensis* sp. n. (p. 36); *O. cheneyi* sp. n. (p. 37); Permian, U.S.A., M. L. Thompson.

\dagger *Operculinoides georgianus* nom. n. (p. 6) [for *Miscellanea soldadensis* Vaughan & Cole 1941 (*non Operculinoides soldadensis* Vaughan & Cole 1941)] Paleocene, Georgia, W. S. Cole & S. M. Herrick.

\dagger *Orbitoides media* subsp. n. *planiformis* (p. 304), Campanian; *O. apiculata* subsp. n. *grünbachensis* (p. 305), Maastrichtian; Central Europe, A. Papp (1).

\dagger *Orbitolina chitralensis*, *kashmirica*, *obesa*, *raoi*, *wadiai*, *hukaungensis* spp. n. (p. 187) [all nom. nud.] Cretaceous, India, M. R. Sahni.

\dagger *Orientoschwagerina* gen. n. *abichi* sp. n. (p. 573) (genotype) Lower Permian, U.S.S.R., A. D. Miklukho-Maklai.

\dagger *Osangularia brunswickensis* sp. n. (p. 24), Eocene, Chile, R. Todd & H. I. Kniker.

\dagger *Ozawainella akiyoshiensis* sp. n. (p. 52) [nom. nud.], Upper Palaeozoic, Japan, R. Toriyama (2); \dagger *O. inflata* sp. n. (p. 31) Wolfcampian, U.S.A., M. L. Thompson; \dagger *O. pisolithica* sp. n. (p. 10), Upper Palaeozoic, Indochina, E. Saurin (1).

\dagger *Pachyphloia caucasica*, *teberdaensis* spp. n. (p. 148) [authorship to Dutkevich] Upper Palaeozoic, Caucasus, E. N. Dyakonova-Savelyeva.

\dagger *Pandaglandulina* gen. n. *dinapoli* sp. n. (p. 7) (genotype) A. R. Loeblich & H. Tappan (1).

\dagger *Paraarchaediscus* gen. n. *dubitabilis* sp. n. (p. 621) (genotype) Carboniferous, Russia, I. N. Orlova.

\dagger *Paradoxiella* gen. n. (p. 934) *pratti* sp. n. (p. 935), Permian, West Texas, J. W. Skinner & G. L. Wilde.

\dagger *Pararotalia subinermis* sp. n. (p. 683), Eocene, England, S. B. Bhatia.

\dagger *Paratextularia* gen. n. (p. 20) (genotype *Textularia* (?) *proboscidea* Cushman & Stainbrook 1943), Devonian, V. Pokórný (2).

\dagger *Paraverbeekina* gen. n. *pontica* sp. n. (p. 574) (genotype) Lower Permian, U.S.S.R. A. D. Miklukho-Maklai.

\dagger *Parrella cheniourensis* sp. n. (p. 27) Cretaceous, Algeria, J. Sigal (1).

\dagger *Planctostoma* gen. n. (p. 8) (genotype *Textularia luculenta* Brady 1884) Recent, A. R. Loeblich & H. Tappan (2).

\dagger *Planulina cheniourensis* sp. n. (p. 20), Cretaceous, Algeria, J. Sigal (1); \dagger *P. convexa* sp. n. (p. 34), Tertiary, Japan, Y. Takayanagi (2); \dagger *P. dakotensis* sp. n. (p. 119) Cretaceous, Wyoming, S. K. Fox; \dagger *P. poronaiensis* sp. n. (p. 42) Paleogene, Japan, K. Asano (1); \dagger *P. synaensis* sp. n. (p. 129) Upper Eocene, Egypt, S. E. Ansary; \dagger *P. nipponica* sp. n. (p. 13) Miocene, Japan, K. Asano (3).

\dagger *Plectina poronaiensis* sp. n. (p. 33) Paleogene, Japan, K. Asano (1).

\dagger *Plectofrondicularia hoststriata* sp. n. (p. 165), Miocene, Bavaria, H. Hagn & O. Hözl (1).

\dagger *Pleurostomella aquafrescaensis* sp. n. (p. 23), Eocene, Chile, R. Todd & H. I. Kniker.

\dagger *Polyphragma codyensis* sp. n. (p. 113) Cretaceous, Wyoming, S. K. Fox.

\dagger *Polysegmentina*; emendation thereof, (p. 16), Loeblich & H. Tappan (2).

\dagger *Profusulinella beppensis* sp. n. (p. 46) [nom. nud.] Upper Palaeozoic Japan, R. Toriyama (2).

\dagger *Proteonina*; emendation thereof (p. 7), A. R. Loeblich & H. Tappan (2).

\dagger *Pseudedomia*; re-definition thereof, F. E. Eames & A. H. Smout; \dagger *P. complanata* sp. n. (p. 505) Cretaceous, Middle East, F. E. Eames & A. H. Smout.

\dagger *Pseudoclavulina euganea* sp. n. (p. 247) Eocene, Italy, F. P. Decima & F. Ferasin.

\dagger *Pseudofusulina robleda* sp. n. (p. 68); *P. loringi* sp. n. (p. 69); *P. (?) moranensis* sp. n. (p. 69); *P. nelsoni* subsp. n. *opima* (p. 70); Wolfcampian, U.S.A., M. L. Thompson; \dagger *P. subtenuis* sp. n. (p. 81); *P. laevicula* sp. n. (p. 87); *P. l. var. n. expansa* (p. 88); *P. vulgaris* var. n. *horiguchii* (p. 90); Permian, Japan, R. Morikawa (4); \dagger *P. vulgaris* var. n. *megasphaerica* (p. 51); *P. globosa* var. n. *exilis* (p. 51); *P. isauensis* sp. n. (p. 51); *P. krafftii* var. n. *magna* (p. 51); [all nom. nud.], Upper Palaeozoic, Japan, R. Toriyama (2).

†Pseudofusulinella utahensis sp. n. (p. 34) [authorship to Thompson & Bissell] Wolfcampian, U.S.A., M. L. Thompson.

†Pseudoglandulina Cushman 1929 ; suppression thereof, (p. 2), A. R. Loeblich & H. Tappan (1) ; **†P. synaensis** sp. n. (p. 55) Upper Eocene, Egypt, S. E. Ansary.

†Pseudoparrella molassica sp. n. (p. 180), Oligocene, Bavaria, H. Hagn & O. Hözl (1) ; **†P. oveyi** sp. n. (p. 684), Eocene, England, S. B. Bhatia.

†Pseudorbitoides Douvillé 1922 ; emendation thereof, P. Brönnimann (2) ; **†P. rutteni** sp. n. (p. 68), Upper Cretaceous, Cuba, P. Brönnimann (2).

†Pseudorbitoididae ; systematics thereof, P. Brönnimann (2).

†Pseudoschwagerina needhami sp. n. (p. 72) ; **P. rhodesi** sp. n. (p. 73) ; **P. convexa** sp. n. (p. 75) ; Wolfcampian, U.S.A., M. L. Thompson.

†Pseudosiderolites gen. n. (p. 206) [genotype *Siderolites vidali* Douvillé 1907] Cretaceous, A. H. Smout (2).

†Pseudotexularia intermedia sp. n. (p. 231), Cretaceous, Bavaria, I. de Klasz (1).

†Pseudotextulariella Barnard 1953 gen. n. (p. 198) ; validation thereof, H. E. Thalmann (1).

†Pullenia osloensis nom. nov. (p. 194) (for *P. quinqueloba* var. *minuta* Feyling-Hanssen 1954) Post-Pleistocene, Oslo, R. W. Feyling-Hanssen (2) ; **†P. quinqueloba** var. *minuta* (p. 133), Post-Pleistocene, Oslo, R. W. Feyling-Hanssen (1).

†Pyrulina shoalcreekenensis, brykerwoodensis spp. n. (p. 344) ; Cretaceous, Texas, F. J. Bullard.

†Pyrulinoides antillaeanus sp. n. (p. 361) Eo-Oligocene, Barbados, J. P. Beckmann.

Quinqueloculina norvangi nom. n. (p. 126) [for *Quinqueloculina nitida* Norvang 1948 (non d'Orbigny)] ; Recent, Argentine coast, E. Boltovskoy (1) ; *Q. pentagona* sp. n. (p. 33), off Genoa, M. Giunta ; *Q. rhodiensis* nom. nov. (p. 12) for *Q. costata*

d'Orbigny 1826 (nom. nud. non Karrer 1867) ; Gulf of Mexico, F. L. Parker (1).

†Ramulina novaculeata nom. n. (p. 346) [for *R. aculeata* Wright 1886 (non *Dentalina aculeata* d'Orbigny 1840)] F. J. Bullard.

†Rectobolivina asanoi sp. n. (p. 96) Miocene, Japan, S. Murata (1).

†Rectoglandulina gen. n. (p. 3) *appressa* sp. n. (p. 4) (genotype) ; *R. obesa* sp. n. (p. 5) ; A. R. Loeblich & H. Tappan (1).

†Rectuvigerina krachemensis sp. n. (p. 484), Miocene, Algeria, G. Cheylan, Magné, Sigal & Grekoff.

†Reichelina lamarensis sp. n. (p. 929), Permian, West Texas, J. W. Skinner & G. L. Wilde ; **†R. ? kiluensis** sp. n. (p. 12), Upper Palaeozoic, Indochina, E. Saurin (1).

†Reticulophragmium gen. n. (p. 557) [nom. nov. for *Alveolophragmium* (pars)] [genotype *Alveolophragmium venezuelanum* Maync, 1952]. W. Maync (4).

†Reussella checchia-rispoli sp. n. (p. 34), Tertiary, Italy, F. M. Kicinski ; **†R. tricarinata** sp. n. (p. 67) Oligocene, Hungary, R. M. Nyirő.

†Reophax lawensis sp. n. (p. 234) ; *R. dalriensis* sp. n. (p. 235), Carboniferous, Scotland, R. H. Cummings (1) ; **†R. romanica** sp. n. (p. 156), Oligocene, Italy, C. Emiliani (1).

†Rhabdammina vaciva sp. n. (pl. 158), Oligocene, Italy, C. Emiliani (1).

†Rhabdorbitoides gen. n. (p. 97) *hedbergi* sp. n. (p. 98) (genotype) Upper Cretaceous, Cuba, P. Brönnimana (3).

†Rimulina, emendation thereof, (p. 22), A. R. Loeblich & H. Tappan (2).

†Robertina conatoi sp. n. (p. 172), Pliocene, Italy, B. Martinis (2).

†Robulus asanoi, tanoensis spp. n. (p. 28), Tertiary, Japan, Y. Takayanagi (2) ; **†R. ashiyaensis** sp. n. (p. 61) Palaeogene, Japan, S. Murata (7) ; **†R. bullatus** var. n. *carinatus* (p. 249), Eocene, Italy, F. P. Decima

& F. Ferasin; *R. limbosus* subsp. n. *chiriquanoi* (p. 143), Recent, Argentine coast, E. Boltovskoy (1); $\dagger R.$ *notoensis* sp. n. (p. 13) Miocene, Japan, K. Asano (3); $\dagger R.$ *trompi* sp. n. (p. 58) Upper Eocene, Egypt, S. E. Ansary; $\dagger R.$ *youngquisti* sp. n. (p. 9), Paleocene, Peru, L. Weiss (2).

$\dagger Rotalia algeriana$ sp. n. (p. 488), Cretaceous, Algeria, G. Cheylan, Magné, Sigal & Grekoff; $\dagger R.$ *beccarii* subsp. n. *hatatatenis* (p. 62) Miocene, Japan, Y. Takayanagi (1); $\dagger R.$ *hensonii* sp. n. (p. 45); *R.* *dukhani* sp. n. (p. 46); Lower Tertiary, Qatar, A. H. Smout (1); $\dagger R.$ *yubarieneis* sp. n. (p. 49) Miocene, Japan, K. Asano (2).

$\dagger Rotaliammina$, emendation thereof, (p. 20), A. R. Loeblich & H. Tappan (2).

$\dagger Rotaliidea$; reclassification thereof, A. H. Smout (2).

$\dagger Sakesaria dukhani$ sp. n. (p. 57); *S. d.* var. n. *cordata* (p. 58); *S. ornata* sp. n. (p. 58); Lower Tertiary, Qatar, A. H. Smout (1).

$\dagger Saracenaria barnardi$ sp. n. (p. 59) Upper Eocene, Egypt, S. E. Ansary; $\dagger S.$ *reesidei* sp. n. (p. 114) Cretaceous, Wyoming, S. K. Fox.

$\dagger Schenckielia stainforthi$ sp. n. (p. 8) Paleocene, Peru, L. Weiss (2).

$\dagger Schlumbergerella$ gen. n. (p. 19) (gentotype *Baculogypsina floresiana* Schlumberger) Quaternary, Indonesia S. Hanzawa (1).

$\dagger Schubertella delumbata$ sp. n. (p. 15), Upper Palaeozoic, Indochina, E. Saurin (1); $\dagger S.$ *japonica* sp. n. (p. 53) [nom. nud.], Upper Palaeozoic, Japan, R. Toriyama (2).

$\dagger Schwagerina okafujii$, *etoi*, *kyowaensis* spp. n. (p. 52) [nom. nud.], Upper Palaeozoic, Japan, R. Toriyama (2); $\dagger S.$ *odakai* sp. n. (p. 100); *S.* *motohashii* sp. n. (p. 101); *S.* *paragumbeli* sp. n. (p. 103); *S.* *muawai* sp. n. (p. 104); Permian, Japan, R. Morikawa (4); $\dagger S.$ *minuta* sp. n. (p. 53); *S.* *campa* sp. n. (p. 54); *S.* *campensis* sp. n. (p. 57); *S.* *pinosensis* sp. n. (p. 58); *S.* *grandensis* sp. n. (p. 59); *S.* *andresensis* sp. n. (p. 60); *S.* *colemani*, *jewetti* spp. n.

(p. 61); *S. vervillei* sp. n. (p. 62); *S. elkoensis* sp. n. (p. 63) [authorship to Thompson & Hansen]; *S. wellensis* sp. n. (p. 64) [authorship to Thompson & Hansen]; *S. eolata* sp. n. (p. 64); *S. neolata*, *complexa* spp. n. (p. 65); *S. youngquisti* sp. n. (p. 67) [authorship to Thompson & Hansen] Wolfcampian, U.S.A., M. L. Thompson.

\dagger *Shackolina*; systematics thereof, E. M. Gallitelli; $\dagger S.$ *tappanae* sp. n. (p. 142), Cretaceous, Italy, E. M. Gallitelli; $\dagger S.$ *cabri* sp. n. (p. 20), Cretaceous, Algeria, J. Sigal (1).

\dagger *Sigmomorphina chileana* sp. n. (p. 18), Eocene, Chile, R. Todd & H. I. Kniker; $\dagger S.$ *inovrocavliensis* sp. n. (p. 192); Jurassic, Poland, W. Bielecka & W. Pozaryski.

\dagger *Silvestriella* gen. n. (p. 17) (genotype *Calcarina tetraedra* Gumbel) Eocene, Europe, S. Hanzawa (1).

\dagger *Sinzowella variabilis* sp. n. (p. 33), Eocene, France, Y. Le Calvez.

\dagger *Siphogenerinoides bentonstonei* sp. n. (p. 249), Cretaceous, Columbia, C. D. Redmond (1).

\dagger *Siphonodosaria chileana* sp. n. (p. 23), Eocene, Chile, R. Todd & H. I. Kniker.

\dagger *Siphotextularia masudai* sp. n. (p. 17), Miocene, Japan, K. Asano (3).

\dagger *Sphaeroidina japonica* sp. n. (p. 19) Miocene, Japan, K. Asano (3).

\dagger *Sphaeroidinella senni* sp. n. (p. 394), Eo-Oligocene, Barbados, J. P. Beckmann.

\dagger *Spirillina elongata* sp. n. (p. 196); Jurassic, Poland, W. Bielecka & W. Pozaryski.

\dagger *Spirolina cylindracea* var. n. *glabra* (22); *S.* *mariei* sp. n. (p. 25); Eocene, France, Y. Le Calvez.

\dagger *Spiroloculina bornemanni* nom. nov. (p. 161) (for *S. limbata* Bornemann 1855, non d'Orbigny 1826), Oligocene, Italy, C. Emiliani (1); $\dagger S.$ *moreletti* sp. n. (p. 504), Eocene, France, Y. Le Calvez & L. Feugueur; $\dagger S.$ *henbesti* nom. n. (p. 82) Petri, [for *Spiroloculina concava* Petri 1954

(*non Sp. acutimargo* Brady var. *concava* Wiesner 1913)], H. E. Thalmann (2).

†*Spiroplectammina apenninica* sp. n. (p. 142) Oligocene, Italy, C. Emiliani (1); †*S. brunswickensis* sp. n. (p. 6); *S. elganoensis* sp. n. (p. 7); Eocene, Chile, R. Todd & H. I. Kniker; †*S. higuchii* sp. n. (p. 27) Tertiary, Japan, Y. Takayanagi (2); †*S. phauloides* sp. n. (p. 54), Cenomanian, Canada, C. R. Stelck & J. H. Wall.

†*Spiroplectinata jaekeli* subsp. n. *senonica* (p. 225), Cretaceous, Bavaria I. de Klasz (1).

†*Stacheoides* gen. n. (p. 343) [genotype *Stacheia polytrematoidea* Brady 1876]; *S. papillata* sp. n. (p. 344), Carboniferous, Great Britain, R. H. Cummings (3).

†*Staffella akagoensis* sp. n. (p. 47) [nom. nud.] Upper Palaeozoic, Japan, R. Toriyama (2); †*S. rotundata* sp. n. (p. 11), Upper Palaeozoic, Indochina, E. Saurin (1).

†*Streblus beccarii* (Linnaeus) var. *mendesi* nom. n. (p. 82) Petri [for "Rotalia" *beccarii* (Linnaeus) var. *angulata* Petri 1954], H. E. Thalmann (2); †*S. saipanensis* sp. n. (p. 27) Miocene, Saipon, W. S. Cole & J. Bridge.

†*Subalveolina pérébaskini* sp. n. (p. 257), Cretaceous, France, M. Reichel.

†*Textularia gravenori* sp. n. (p. 55) Cenomanian, Canada, C. R. Stelck & J. H. Wall; †*T. leinzi* nom. n. (p. 82), Petri [for *Textularia curta* Petri 1954 (*non T. flintii* Cushman var. *curta* Cushman 1922)], H. E. Thalmann (2); †*T. magallanica* sp. n. (p. 7), Eocene, Chile, R. Todd & H. I. Kniker; †*T. yatsushiroensis* sp. n. (p. 96) Miocene, Japan, S. Murata (1); †*T. notoensis* sp. n. (p. 20) Miocene, Japan, K. Asano (3).

†*Textularioides*; emendation thereof (p. 11), A. R. Loeblich & H. Tappan (2).

†*Thurammina minuscula* sp. n. (p. 2) Devonian, Czechoslovakia, V. Pokorný (2).

†*Tosaia* gen. n. *hanzawai* sp. n. (p. 30), (genotype) Tertiary, Japan, Y. Takayanagi (2).

†*Triasina* gen. n. *hantkeni* sp. n. (p. 368), Mesozoic, Hungary, L. Majzon (3).

†*Trilocularena* gen. n. (p. 13) (genotype *Miliammina circularis* Heron-Allen & Earland 1930) Recent A. R. Loeblich & H. Tappan (2).

†*Trisegmentina*; emendation thereof, (p. 15), A. R. Loeblich & H. Tappan (2).

†*Tristix carinata* sp. n. (p. 17) Cretaceous, Algeria, J. Sigal (1).

†*Tritaxia*, emendation thereof, (p. 19), A. R. Loeblich & H. Tappan (2); †*T. pyramidata* var. n. *diminuta* (p. 56) Cenomanian, Canada, C. R. Stelck & J. H. Wall; †*T. spiritensis* subsp. *prolongata* nom. n. (p. 82), Stelck & Wall [for *Tritaxia spiritensis* subsp. *elongata* Stelck & Wall 1954 (*non T. elongata* Halkyard 1919)], H. E. Thalmann (2).

†*Triticites langsonensis* sp. n. (p. 23) Upper Palaeozoic, Indochina, E. Saurin (1); †*T. pointensis* sp. n. (p. 37); *T. directus*, *confertus*, spp. n. (p. 38); *T. cincinnatus* sp. n. (p. 42); *T. cellamagnus* sp. n. (p. 43) [authorship to Thompson & Bissell]; *T. rockensis* sp. n. (p. 44), Wolfcampian, U.S.A., M. L. Thompson; †*T. isaensis*, *obai*, *michiae*, *tantula* spp. n. (p. 50); *T. ellipsoidalis*, *kuroiwaensis*, *densa*, *biconica* spp. n. (p. 51); [all nom. nud.], Upper Palaeozoic, Japan, R. Toriyama (2).

† ? *Trochammina algeriana* sp. n. (p. 481), Senonian, Algeria, G. Cheylan, Magné, Sigal & Grekoff; †*T. ashiyaensis* sp. n. (p. 61) Palaeogene, Japan, S. Murata (7); †*T. rutherfordi* sp. n. (p. 56); *T. wetteri* sp. n. (p. 59) Cenomanian, Canada, C. R. Stelck & J. H. Wall.

Trochamminisca gen. n. *cyclostoma* sp. n. (p. 7) [genotype] Northern Pacific, Z. G. Shchedrina.

Trochamminula gen. n. *fissuraperta* sp. n. (p. 5) [genotype] Northern Pacific, Z. G. Shchedrina.

\dagger *Trocholina solecensis* sp. n. (p. 198); Jurassic, Poland, W. Bielecka & W. Pozaryski.

\dagger *Tubinella*, emendation thereof, (p. 18), A. R. Loeblich & H. Tappan (2).

\dagger *Uvigerina costai* nom. n. (p. 12) [for *Uvigerina striata* Costa 1856 (*non d'Orbigny*)], Pliocene, Egypt, R. Said (1); \dagger *U. hibridica* sp.n. (p. 606) [nom. nud.] Tertiary, Poland, N. N. Subbotina, V. V. Glushko, & L. S. Pishvanova; \dagger *U. mediterranea* var. n. *compressa* (p. 96), Upper Eocene, Egypt, S. E. Ansary.

\dagger *Vaginulina chugokuensis* sp. n. (p. 73) Miocene, Japan, S. Murata (8); \dagger *V. zaglobensis* sp. n. (p. 173); *V. z.* var. n. *paralella* (p. 176); *V. kujaviensis* sp. n. (p. 177); Jurassic, Poland, W. Bielecka & W. Pozaryski.

\dagger *Vaginulinopsis pseudodecorata* sp. n. (p. 146), Oligocene, Bavaria, H. Hagn & O. Hözl (1).

\dagger *Valvulammina parrelloides* sp. n. (p. 482), Senonian, Algeria, G. Chaylan, Magné, Sigal & Grekoff.

\dagger *Valvulina angulosa* sp. n. (p. 12); *V. cribrobuliminoidea*, *guillaumei* spp. n. (p. 13); *V. terquemi* nom. n. (p. 14) [for *Textilaria spinigera* Terquem 1882]; *V. triedra* sp. n. (p. 14); Eocene, France, Y. Le Calvez.

\dagger *Valvulineria fabianii* sp. n. (p. 36) Tertiary, Italy, F. M. Kicinski; \dagger *V. masudai* sp. n. (p. 20) Miocene, Japan, K. Asano (3); \dagger *V. palegrensis* sp. n. (p. 16), Paleocene, Peru, L. Weiss (2).

\dagger *Vasicekia* gen. n. *moravica* sp. n. (p. 11) (genotype) Devonian, Czechoslovakia, V. Pokorný (2).

\dagger *Ventilarella decoratissima*, *alpina* spp. n. (p. 228); *V. bipartita* sp. n. (p. 229); *V. multicamerata* sp. n. (p. 230); Cretaceous, Bavaria, I. de Klasz (1).

\dagger *Verbeekina verbeekii* var. n. *teberdaensis* (p. 144), Upper Palaeozoic, Caucasus, E. N. Dyakonova-Savelyeva.

\dagger *Verneuilinoides perplexus* var. n. *gleddiei* (p. 61) Cenomanian, Canada, C. R. Stelck & J. H. Wall.

\dagger *Virgulina loeblichi* sp. n. (p. 191) Post-Pleistocene, Oslo, R. W. Feyling-Hanssen (2); *V. riggi* sp. n. (p. 186), Recent, Argentine coast, E. Boltovskoy (1); \dagger *V. complanata* subsp. n. *fugeskiepsis* (p. 20), Miocene, Japan, K. Asano (3); \dagger *V. dorreeni* sp. n. (p. 16), Paleocene, Peru, L. Weiss (2).

\dagger *Voorthuyssenia* gen. n. (p. 169) (genotype *Epistomina tenuicostata* Bartenstein); *V. brandi* sp. n. (p. 183); *V. parafavosoides* sp. n. (p. 186); *V. pachyderma* sp. n. (p. 185); Mesozoic, J. Hofker (1).

\dagger *Yabeina texana* sp. n. (p. 937), Permian, West Texas, J. W. Skinner & G. L. Wilde.

\dagger *Yanbonia* gen. n. *moniliforme* sp. n. (p. 384) (genotype), Cretaceous, Burma, M. R. Sahni & V. V. Sastri.

(d) Heliozoa.

[No record].

(e) Radiolaria.

New radiolaria from the Okhotsk Sea, V. V. Reshetnyak (1).

\dagger New Tertiary radiolaria from the East Indies, W. R. Riedel.

Circospathis sexfurca subsp. n. *trifida* (p. 33), Okhotsk Sea, Russia, V. V. Reshetnyak (1).

Coelacantha dogielii sp. n. (p. 36), Okhotsk Sea, Russia, V. V. Reshetnyak (1).

Cytocladus dogielii sp. n. (p. 10); Bering Straits, V. V. Reshetnyak (2).

\dagger *Eucyrtidium elongatum* subsp. n. *peregrinum* (p. 812), Tertiary, East Indies, W. R. Riedel.

\dagger *Lamprocyclas maritalis* subsp. n. *antiqua* (p. 811), Tertiary, East Indies, W. R. Riedel.

\dagger *Lychnodictyum audax* sp. n. (p. 810), Tertiary, East Indies, W. R. Riedel.

\dagger *Panartus avitus* sp. n. (p. 808), Tertiary, East Indies, W. R. Riedel.

†*Spongodiscus communis* subsp. n.
fragilis (p. 809), Tertiary, East Indies,
W. R. Riedel.

Tuscarella horrida sp. n. (p. 33),
Okhotsk Sea, Russia, V. V. Reshet-
nyak (1).

2.—MASTIGOPHORA

A. PHYTOMASTIGINA

(a) Chrysomonadida.

†Systematics of the Cocco litho-
phoridae, T. Braarud, G. Deflandre,
P. Halldal & E. Kamptner.

†*Braarudosphaera bigelowi* (Gran.
& Braarud) comb. nov. (p. 380) for
Pontosphaera bigelowi Gran. &
Braarud 1935) Eocene, B. Klumpp.

Coccolithites pinguis sp. n. (p. 35);
C. molengraaffi sp. n. (p. 35); *C.*
timorensis, *tibia*, *rottinensis*, *tubiformis*,
obtusus, spp. n. (p. 36); *C. discordeus*
sp. n. (p. 37); *C. debilis* sp. n. (p. 38);
C. leptos sp. n. (p. 11); *C. crenulatus*,
tholus, *petasus*, *indicus*, *striatus*, *detor-*
quatus, spp. n. (p. 12); *C. tuberculatus*,
insectus, spp. n. (p. 13); *C. sulcatus*,
pennatus, *ellipticus*, *lapillus*, *australis*,
paucofistratus spp. n. (p. 14); *C. arcuatus*,
circumvallatus, *martini*, *trematotes*,
pachymorphus, spp. n. (p. 15); *C.*
deflandrei, *anisotrema*, *excavatus*,
biperforatus, spp. n. (p. 16); *C. convexus*,
sinuatus, *circumlatus*, *glabrus*, spp.
n. (p. 17); *C. lopodomorphus*,
pacificus, *concameratus*, *amplificatus*,
campyloneis, *curvatus* spp. n. (p. 18);
C. alternans, *multipunctatus*, *buccu-*
lentus, *pusillus*, *calathus* spp. n. (p. 19)
C. arachnoideus, *crassilabris*, *cristatus*,
verbeeki, *multiforatus* spp. n. (p. 20)
C. attenuatus, *obliquus*, *infralimbatus*
spp. n. (p. 21); *C. cruciatus* sp. n.
(p. 22); *C. pachys*, *lepidus*, *multirai-*
atus, *tornatus*, *cingulum*, *modestus*,
spp. n. (p. 27); *C. imago*, *acutus*,
sculptus, *sondanensis*, *caelatus* spp. n.
(p. 28); *C. humilis* sp. n. (p. 31);
C. unilimbatus sp. n. (p. 32); Recent,
East Indies, E. E. Kamptner.

Coccolithus brouweri sp. n. (p. 32);
C. areolatus, *membranaceus*, spp. n.
(p. 33); *C. radiatus*, *decussatus*, *cruci-*
ferus, spp. n. (p. 34); Recent, East
Indies, E. Kamptner.

Codonomonas cylindrica, *dilatata*
spp. n. (p. 166), brackish water,
Belgium, W. Conrad & H. Kufferath

Cyclococcolithus wanneri, *paucira-*
diatus spp. n. (p. 29); *C. moluccensis*,
hemisphaericus, *collaris*, spp. n. (p. 30);
C. elatus, *tanianus*, spp. n. (p. 31);
C. tropicus, *craterformis*, spp. n.
(p. 32); *C. turgens* sp. n. (p. 34);
Recent, East Indies, E. Kamptner.

Labyrinthula algeriensis sp. nov.
(p. 358), on fronds of *Laminaria*
iberica, A. Hollande & M. Enjumet
(1).

Labyrinthulidae ; systematics
thereof, A. Hollande & M. Enjumet
(1).

Mallomonas subsalina sp. n. (p.
168), brackish water, Belgium, W.
Conrad & H. Kufferath.

†*Pemma* gen. n. *rotundum* sp. n.
(p. 381) (genotype) Eocene, Germany,
B. Klumpp.

Scyphosphaera globulosa, *procera*,
piriformis, *ampla*, spp. n. (p. 23);
S. cylindrica, *canescens*, *penna*, *can-*
tharellus, spp. n. (p. 24); *S. lagena*
sp. n. (p. 25); *S. conica*, *turris*,
tubifera spp. n. (p. 26); Recent,
East Indies, E. Kamptner.

(b) Cryptomonadida.

[No record]

(c) Dinoflagellata.

†*Deflandreidae* fam. nov. (p. 52),
Oligocene, A. Eisenack (1).

Peridinium tregouboffi sp. n. (p. 2)
marine, Monaco, Y. Halim..

†*WetzelIELLA similis* sp. n. (p. 58);
W. samlandica, *ovalis*, spp. n. (p. 59)
Oligocene, A. Eisenack (1).

(d) Euglenoidida.

Cyclidiopsidaceae fam. n. (p. 404);
G. Huber-Pestalozzi (1).

Euglena basisstellata, *foliacea* spp. n.
(p. 205) brackish water, Belgium,
W. Conrad & H. Kufferath.

Euglenocapsaceae fam. n. (p. 399);
G. Huber-Pestalozzi (1).

(e) Phytomonadida.

Brachiomonas manca sp. n. (p. 217) brackish water, Belgium, W. Conrad & H. Kufferath.

Carteria cuboides, feldmanni, spp.n (p. 220); *C. doelensis, irregularis, konion* spp. n. (p. 219); *C. massarti* sp. n. (p. 218); *C. vectensis* nom. n. (p. 218); brackish water, Belgium, W. Conrad & H. Kufferath.

Chlamydomonas fossalis sp. n. (p. 224), brackish water, Belgium, W. Conrad & H. Kufferath.

Conradimonas minusculus sp. n. (p. 226), brackish water, Belgium, W. Conrad & H. Kufferath.

Platymonas lilloensis sp. n. (p. 235), brackish water, Belgium, W. Conrad & H. Kufferath.

Polytomella: generic characters; *Polytomella papillata* sp. n. (p. 139), *P. parva* sp. n. (p. 139), *P. magna* sp. n. (p. 140), *P. capuana* sp. n. (p. 141), from Germany, E. G. Pringsheim.

*Pyramimonas cruciata, micron, tetralampa*s spp. n. (p. 234); *P. cuneata*, sp. n. (p. 230); *P. nanella* sp. n. (p. 231); *P. longa, torta* spp. n. (p. 232); *P. inflata, pisum, urceolata* spp. n. (p. 233); *P. extravagans* sp. n. (p. 235); brackish water, Belgium, W. Conrad & H. Kufferath.

Scherffelia dubia var. n. *major* (p. 255), brackish water, Belgium, W. Conrad & H. Kufferath.

Sphenochloris lilloensis sp. n. (p. 225); brackish water, Belgium, W. Conrad & H. Kufferath.

B. ZOOMASTIGINA

(f) Protomonadida.

Leishmania zmeevi sp. n. (p. 55) from lizards, Middle Asia, A. M. Andruško & G. S. Markov (1).

Retortamonas testudae sp. n. (p. 62), intestina of tortoise, *Testudo argentina* London, M. A. R. Ansari (3).

Trypanosoma: morphology and life-cycles, E. R. Noble; *T. inopinatum*: revision of life-cycle in frog and leech, B. Buttner & N. Bourcart (1); *T. rangeli*: records, incidence, affini-

ties and life-cycle, R. Zeledon (1); *T. rangeli*, *T. ariarii* and related species in S. America, H. Groot; *T. napolesi* sp. n. (p. 52), *T. rebeloi* sp. n. (p. 55), *T. serranoi* sp. n. (p. 57) from fish *Tilapia*, Mozambique J. A. Travassos Santos Dias; *T. ocularensis* sp. n. (p. 207) from S. American lizard, J. V. Scorza & C. Dagert; *T. striati* sp. n. (p. 84) from Indian fish S. S. Qadri; *T. serveti* sp. n. (p. 147) from Mexican lizard, D. Pelaez & F. Streber.

(g) Trichomonadida.

Hexamastix kirbyi sp. n. (p. 2), *H. crassus* sp. n. (p. 7) from Californian lizards, B. M. Honigberg (1).

Tritrichomonas simoni sp. n. (p. 2) from American grouse, R. F. Honess (1).

(h) Hypermastigida.

Holomastigotoides dharwarensis sp. n. (p. 17), *H. rayi* sp. n. (p. 18) from Indian termites, K. R. Karandikar & M. Vittal.

Parajoenopsis gen. n. (p. 37) (for *Joenopsis cephalotricha* Cutler) from Indian termite, M. Saleem.

Prorotrichonympha gen. n. (p. 35) (for *Trichonympha pristina* Imms) from Indian termite, M. Saleem.

Pseudotrichonympha cardiformis sp. n. (p. 2), *P. pisciformis* sp. n. (p. 6), *P. subapicalis* sp. n. (p. 8) from Indian termites, K. R. Karandikar & M. Vittal.

Spirotrichonympha froilanai sp. n. (p. 20), *S. karnataki* sp. n. (p. 21) from Indian termites, K. R. Karandikar & M. Vittal.

Trichonympha agilis var. n. *danubica* (p. 42) from termites, Rumania, M. A. Ionescu & A. Murgoci.

(i) Diplomonadida.

Giardia muris: morphology and division, M. A. R. Ansari (1); *G. intestinalis*: review of present knowledge, M. A. R. Ansari (2).

(j) Polymonadida.

[No record.]

(k) Opalinida.

Opalinid ciliates regarded as belonging to Zoomastigine order Opalinida, J. O. Corliss (2).

3.—SPOROZOA

A. COCCIDIOMORPHA

(a) Gregarinida.

Gregarines (undetermined) pathogenic to bees, M. Stejskal.

Gregarines from Tenebrionid beetles of Israel: description and host-list, J. Théodoridès (2).

Actinocephalus conicus var. n. *magna* (p. 76) from beetles, France, J. Théodoridès (5).

Alaspora gen. n. *depressa* sp. n. (p. 19) from Japanese insects, K. Obata.

Ancyrophora cervicornis sp. n. (p. 72) from beetles, France, J. Théodoridès (5).

Apolocystis pertusa sp. n. (p. 96), from oligochaetes, France, R. Loubatières.

Ascocephalus gen. n. *armatus* sp. n. (p. 17) from Japanese insects, K. Obata.

Campanacephalus gen. n. *villiersi* sp. n. (p. 813) from African beetle, J. Théodoridès (8).

Didymophyes scarabaei sp. n. (p. 55), *D. sisyphi* sp. n. (p. 56), *D. tuzetae* sp. n. (p. 58) from beetles, France, J. Théodoridès (5); *D. diminuta* sp. n. (p. 12) from Japanese insects, K. Obata.

Dirhynchocystis elongata sp. n. (p. 115) from oligochaetes, France, R. Loubatière.

Gregarina spp. parasitic in Tenebrionid beetles: description and host-list, J. Théodoridès (1); *G. scutovertexi* sp. n. (p. 35), *G. corolla* sp. n. (p. 35) from mite, Czechoslovakia, B. Erhardova (1); *G. fastidiosa* sp. n. (p. 398), *G. gibbsi* sp. n. (p. 395) *G. sandoni* sp. n. (p. 399), *G. impetuosa* sp. n. (p. 402) from S. African cockroaches, A. D. Harrison; *G.*

craspedonoti sp. n. (p. 6), *G. chilocori* sp. n. (p. 5), *G. arthromacrae* sp. n. (p. 3), *G. gonocephali* sp. n. (p. 9), *G. tokonoi* sp. n. (p. 11), *G. ovoidellitis* sp. n. (p. 10) from Japanese insects, K. Obata; *G. wahrmanni* sp. n. (p. 12), *G. ormieri* sp. n. (p. 15), *Gregarina* sp. n. (? n.) (pp. 10, 14, 17) from Tenebrionid beetles, J. Théodoridès (1); *G. maculata* var. n. *banyulensis* (p. 64) from beetles, France, J. Théodoridès (5).

Hoplorhynchus hexacanthus sp. n. (p. 16) from Japanese insects, K. Obata.

Monocystidae: key for determination of genera, characters of latter, morphology and bionomics, and host-list, R. Loubatières.

Monocystis buccalis sp. n. (p. 101), *M. cristata* sp. n. (p. 110), *M. cuneiformis* sp. n. (p. 110), *M. hederacea* sp. n. (p. 116), *M. lopadiformis* sp. n. (p. 111), *M. proteiformis* sp. n. (p. 116) *M. hispida* sp. n. (p. 88) from Oligochaetes, France, R. Loubatières; *M. dichogasteri* sp. n. (p. 372) from African Oligochaete, O. Tuzet & M. Zuber-Vogeli.

Nematocystis caudata sp. n. (p. 121) *N. claviformis* sp. n. (p. 97), *N. clipeiformis* sp. n. (p. 131), *N. navicula* sp. n. (p. 132), *N. sinuosa* sp. n. (p. 119), *N. tuzeti* sp. n. (p. 135), *N. pistilliformis* sp. n. (p. 105) from Oligochaetes, Frances, R. Loubatières.

Ramicephalus gen. n. *ozakii* sp. n. (p. 20) from Japanese insects, K. Obata.

Rhynchocystis ovata sp. n. (p. 120) from Oligochaetes, France, R. Loubatières.

Schizogregarines: revised systematics (families, tribes, genera), J. Weiser (1, 3, 4).

Steinina minor sp. n. (p. 14) from Japanese insects, K. Obata.

Stenophora mandrakae sp. n. (p. 18) from Madagascar Myriapods, O. Tuzet & J. F. Manier; *S. ozakii* sp. n. (p. 94) for *S. nematooides* L. & D. 1903 pro parte, T. Hukui.

Stictospora provincialis var. n. *anomala* (p. 80) from beetles, France,

J. Théodoridès (5); *S. coelocystis* sp. n. (p. 15) from Japanese insects, K. Obata.

Stylocephalus eastoni sp. n. (p. 83), *S. phalloides* sp. n. (p. 87) from beetles, France, J. Théodoridès (5).

Triboliocystis garnhami gen. n., sp. n. (p. 155) from flour beetle, England, A. S. Dissanaike (2).

Zygocystis cordiformis sp. n. (p. 106) *Z. eiseniae* sp. n. (p. 114), *Z. grassei* sp. n. (p. 90) from Oligochaetes, France, R. Loubatières.

(b) Coccidiida.

Coccidia of mammals and birds in Czechoslovakia, B. Ryšavý.

Cryptosporidium meleagridis sp. n. (p. 262) from turkeys, Britain, D. Slavin.

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(h) Haplosporidia.

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OPALINATA

Opalinidae regarded as and transferred to Mastigophora Zoomastigina (k) as Opalinida (q.v.), J. O. Corliss (1, 2).

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Hovasiella gen. n. *polydorae* sp. n. (p. 32) P. de Puytorac (1).

Juxtaradiophrya enchytraeoidei sp. n. (p. 97), on *Enchytraeoides* (Oligochaete), Roscoff, P. de Puytorac (3).

Lacrymaria lagynus sp. n. (p. 272); *L. lanceolata* sp. n. (p. 273), temporary meadow pool, Hungary, J. Gelei.

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Lwoffia gen. n. *ciliifera* sp. n. (p. 285) (genotype), on branchial filaments of *Brachidontes (Mytilus) recurvus*, America, E. N. Kozloff.

Nassula tricirrata subsp. n. *primitiva* (p. 862), temporary meadow pool, Hungary, J. Gelei.

Paramecium; systematics thereof, R. Wichtermann (1); diagnostic value of buccal organelles and discussion of systematic position, A. Yusa.

Penardiella ophryoglena sp. n. (p. 281), temporary meadow pool, Hungary, J. Gelei.

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Phascolodon limneticum sp. n. (p. 289), temporary meadow pool, Hungary, J. Gelei.

Plagiocampa ovata sp. n. (p. 268), temporary meadow pool, Hungary, J. Gelei.

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Ptychstomum dichogasteri sp. n. (p. 373) from African Oligochaete, O. Tuzet & M. Zuber-Vogeli.

Radiophrya intermedia sp. n. (p. 93) on *Enchytraeoides* (Oligochaete), Roscoff, P. de Puytorac (3).

Sonderia labiata sp. n. (p. 210), sands, France, E. Fauré-Fremiet & M. Tuffrau.

Spathidium ascendens sp. n. (p. 518); *S. polymorphum* sp. n. (p. 530), F. Wenzel; *S. longinucleatum* sp. n. (p. 279); *S. sacculum* sp. n. (p. 280), temporary meadow pool, Hungary, J. Gelei.

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subsp. n. *americanus* (p. 209), cultured, U.S.A.; *B. u.* **subsp. n.** *japonicus* (p. 216), Yamagata; S. Suzuki.

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Licnophora liudiae sp. n. (p. 146), on larvae of *Liudia*, Bay of Algiers, M. Hamon.

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Parafolliculina malacophila sp. n. (p. 183), *P. ostricola* sp. n. (p. 184) from coasts of Argentine, with key to spp. of genus, R. A. Ringuelet.

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Hemiholostiche gen. n. *viridis* sp. n. (p. 314) (genotype), temporary meadow pool, Hungary, J. Gelei.

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Acineta grahami sp. n. (p. 45) from Antarctic islands, C. A. Allgén.

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†Problematical microfossils from the Cuban Mesozoic, [Probably algal-hence not listed separately], P. Brönnimann (4).

†New Palaeozoic chitinozoans from North Europe, A. Eisenack (3).

†New Hystrichosphaeridians from the German Palaeozoic, D. Sanne-mann.

†Eocene microfossils from Germany, B. Klumpp.

†Oligocene microfossils from Bavaria, A. Eisenack (1).

†*Agalmatoaster* gen. n. *septem-radiatus* sp. n. (genotype) (p. 384) Eocene, B. Klumpp.

†*Ancyrochitina* gen. n. (p. 163) (genotype *Conochitina ancyrea* Eisenack 1931) Palaeozoic, A. Eisenack (2); †*A. fragilis* sp. n. (p. 175), Palaeozoic, Germany, A. Eisenack (2).

†*Angochitina filosa* sp. n. (p. 176) Palaeozoic, Germany, A. Eisenack (2); †*A. devonica*, sp. n. (p. 318) Devonian, Eifel, A. Eisenack (3).

†*Archaeomonas burdigalensis* sp. n. (p. 345) Tertiary, Spain, G. Colom (1).

†*Areoligera incerta* sp. n. (p. 389); Eocene, B. Klumpp.

†*Chonesphaera* gen. n. (p. 395) *incerta* sp. n. (p. 395); Eocene, Germany, B. Klumpp.

†*Conochitina intermedia* sp. n. (p. 161) Palaeozoic, Germany, A. Eisenack (2); †*C. conulus* sp. n. (p. 312), Palaeozoic, Baltic area; *C. oelandica* sp. n. (p. 312) Caradocian, Baltic area; A. Eisenack (3).

†*Cyathochitina* gen. n. (p. 313) [genotype *C. campanulaeformis* (Eisenack 1931)]; *C. regnelli* sp. n. (p. 313) Palaeozoic, Baltic area, A. Eisenack (3).

†*Discoaster heptaradiatus, nonradiatus* spp. n. (p. 383), Eocene, B. Klumpp.

†*Dictyotidium* gen. n. (p. 179) (genotype *Leiosphaera dictyota* Eisenack 1938); *D. tenuiornatum* sp. n. (p. 180); Palaeozoic, Germany, A. Eisenack (2).

†*Hystrichokibotium* gen. n. (p. 387) *pseudofurcatum* sp. n. (p. 388) (genotype); Eocene, B. Klumpp.

†*Hystrichokolpoma* gen. n. (p. 388) *cinctum* sp. n. (p. 389) (genotype); Eocene, B. Klumpp.

†*Hystrichosphaeridium alcicornu* sp. n. (p. 65); *H. inodes* subsp. n. *gracilis* (p. 66); *H. divergens* sp. n. (p. 67); *H. biformoides* sp. n. (p. 68); Oligocene, A. Eisenack (1); †*H. eoplanctonicum* sp. n. (p. 178); *H. meson* nom. nov. (p. 179) (for *H. intermedium* Deffandre 1937 non Wetzel), Palaeozoic, Germany, A. Eisenack (2); †*H. microtriainia, tiara*, spp. n. (p. 390); *H. inodes* sp. n. (p. 391); *H. diktyoplokus*; *H. d.* subsp. n. *latum* (p. 392); Eocene, B. Klumpp; †*H. astertes* sp. n. (p. 325); *H. brevispinosum* subsp. n. *callosum* (p. 325); *H. b.* subsp. n. *castaneoides* (p. 326); *H. coniferum, differtum, dignum, eisenacki* spp. n. (p. 327); *H. franconicum* sp. n. (p. 328); *H. integrum, longispinosoides* spp. n. (p. 329); *H. multipilosum* subsp. n. *validum* (p. 330); *H. mutabile, robustum* spp. n. (p. 331); *H. robustum* subsp. n. *robustum, fissum* (p. 331); *H. trifurcatum* subsp. n.

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†*Palmnickia* gen. n. (p. 69) *lobifera* sp. n. (p. 70) (genotype) Oligocene, A. **Eisenack** (1).

†*Pterochitina* gen. n. (p. 177) (genotype *Bion perivelatum* Eisenack 1937) Palaeozoic, A. **Eisenack** (2); †*P. retracta* sp. n. (p. 317) Ordovician, Baltic area, A. **Eisenack** (3).

†*Pterospermopsis pelagica* sp. n. (p. 71) Oligocene, A. **Eisenack** (1).

†*Samlandia* gen. n. *chlamydophora* sp. n. (p. 76), Oligocene, A. **Eisenack** (1).

†*Sphaerochitina* gen. n. (p. 162) (genotype *Lagenochitina sphaerocephala* Eisenack 1932) Palaeozoic, A. **Eisenack** (2); †*S. acanthifera* sp. n. (p. 314), Palaeozoic, Baltic area, A. **Eisenack** (3).

†*Stylodiniopsis* gen. n. *maculatum* sp. n. (p. 75), Oligocene, A. **Eisenack** (1).

†*Tetrabrachiophora* gen. n. *natans* sp. n. (p. 76), Oligocene, A. **Eisenack** (1).

†*Trochoaster* gen. n. (p. 384) *simplex* sp. n. (p. 385) (genotype); *T. duplex* sp. n. (p. 385); Eocene, B. **Klumpp**.

